EXHIBIT A1

REDACTED VERSION OF DOCUMENT SOUGHT TO BE SEALED

Redacted in its Entirety

EXHIBIT A2

REDACTED VERSION OF DOCUMENT SOUGHT TO BE SEALED

Redacted in its Entirety

EXHIBIT A3

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

CISCO SYSTEMS, INC. AND
CISCO TECHNOLOGY, INC.

Plaintiffs,

v.

HUAWEI TECHNOLOGIES, CO., LTD.,
HUAWEI AMERICA, INC. AND
FUTUREWEI TECHNOLOGIES, INC.,

Defendants.

CIVIL ACTION NO. [2-03CV-027]

COMPLAINT AND JURY DEMAND

For its complaint against Defendants Huawei Technologies Co., Ltd. ("Huawei"), Huawei America, Inc. ("Huawei America") and FutureWei Technologies, Inc. ("FutureWei") (collectively "Defendants"), Plaintiffs Cisco Systems, Inc. ("Cisco Systems") and Cisco Technology, Inc. ("Cisco Technology") (collectively "Cisco") allege as follows:

I. NATURE OF THE ACTION

1. This is an action arising from Defendants' systematic and wholesale infringement of Cisco's intellectual property. Huawei, a Chinese company, and its wholly owned United States subsidiaries, Huawei America and FutureWei, manufacture and offer for sale a line of network routers designed to compete with Cisco's network routers. Unlike Cisco, however, which invested substantially in the development of its own proprietary router technology and software, Huawei has chosen to misappropriate and infringe Cisco's intellectual property in an attempt to develop a cheaper, inferior router which Huawei claims is compatible with Cisco's routers. In doing so, Huawei and its U.S. subsidiaries have shown a complete disregard for Cisco's intellectual property rights and the laws which protect those rights. The extent of Defendants' copying and misappropriation of Cisco's intellectual property is

staggering. Defendants have copied Cisco's patented technologies; they have copied the copyrighted user interface for Cisco's routers; they have made verbatim copies of whole portions of Cisco's user manuals; and there is overwhelming evidence that they unlawfully gained access to Cisco's source code and copied it as the basis for the operating system for their knock-off routers. Cisco brings this action to enjoin this wholesale theft of its valuable intellectual property and recover the substantial damages it has incurred from Defendants' illegal conduct.

II. PARTIES

2. Cisco Systems is a California corporation with its principal place of business in San Jose, California. It is a worldwide leader in the development, manufacture and sale of computer networking products.

3. Cisco Technology is a California corporation with its principal place of business in San Jose, California. Cisco Technology is a wholly-owned subsidiary of Cisco Systems.

4. On information and belief, Huawei is a foreign corporation with its principal place of business in the Peoples Republic of China. It is a multi-billion dollar company that conducts business throughout the world in the manufacture and sale of network and telecommunications equipment. On information and belief, Huawei conducts business in this judicial district through FutureWei and/or Huawei America.

5. FutureWei is a corporation organized and existing under the laws of the State of Texas with its principal place of business at 1700 Alma Drive, Plano, Texas. On information and belief, FutureWei is a wholly owned subsidiary of Huawei. FutureWei is present in and conducts business in this judicial district. In addition to its Plano office, FutureWei also maintains offices in San Jose, California and Reston, Virginia. FutureWei's registered agent is:

Rongxin Chong
1700 Alma Drive, Suite 500
Plano, Texas 75075

6. Huawei America is a corporation organized and existing under the laws of the State of California with its principal place of business in San Jose, California. On information and belief, Huawei America is a wholly owned subsidiary of Huawei. Huawei America is present in and conducts business in this judicial district. In addition to its San Jose office, Huawei America also maintains a sales office in Plano, Texas. Huawei America's registered agent is:

James Yan
3772 Sun West Terrace
Fremont, CA 94555

III. JURISDICTION AND VENUE

7. Defendants transact business and are found in this judicial district through regular business conduct and activity that includes, among other things, the following:

a. Huawei offers for sale in this district the network routers and related software which are alleged in this action to infringe Cisco's intellectual property rights.

b. Huawei already has made commercial sales in the United States of the network routers which are alleged in this action to infringe Cisco's intellectual property rights, including sales originated from the sales office in Plano, Texas.

c. Huawei and FutureWei each operate a website for the purpose of promoting Huawei products, including the network routers, switches and other network products that use the software alleged to infringe Cisco's intellectual property rights. The Huawei and FutureWei websites can be accessed by customers, potential customers and others located in this district for information about the allegedly infringing routers and other Huawei products, as well as employment opportunities with Huawei's interests in the United States. The infringing computer software created by Defendants through the violation of Cisco's rights, referred to as "VRP," and the infringing user manuals created by Defendants through the violation of Cisco's rights can be downloaded by residents of this district through the Huawei website.

d. Huawei operates a research and development facility in this district, in Plano, and has actively recruited residents of this district and elsewhere for employment at that facility.

e. Huawei has incorporated a subsidiary in Texas (FutureWei) for the purpose of doing business in the United States. The FutureWei sales office in Plano, Texas promotes and sells the infringing routers which are the subject of this action and otherwise conducts business in this judicial district.

f. Huawei has created a California subsidiary (Huawei America) for the purpose of doing business in the United States. Huawei America also maintains a sales office in Plano, Texas, through which it regularly engages in activities to promote and sell the infringing routers and otherwise conducts business in this judicial district.

g. Huawei, FutureWei and Huawei America are accused of committing a number of illegal acts and infringements of Cisco's intellectual property, the harmful effect of which is felt in this judicial district where Cisco sells a substantial volume of products and maintains a substantial research and development facility.

8. The Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331, 1338(a) and (b), and 1367 and the doctrine of supplemental jurisdiction.

9. Venue is proper in this judicial district pursuant to 28 U.S.C. §§ 1391 and 1400 because (1) Huawei is a foreign corporation subject to personal jurisdiction in this district, (2) Defendants reside and may be found in this judicial district, (3) the acts of infringement and misappropriation alleged herein were committed in this judicial district, (4) Defendants have a regular and established place of business in this district, and/or (5) a substantial part of the events giving rise to the claims occurred in this judicial district.

IV. FACTUAL BACKGROUND

10. Cisco provides a broad line of hardware and software solutions for transporting data, voice, and video over networks and throughout the Internet. Included in the equipment Cisco provides are network routers, switches, and devices that enable data and

information to be transported from one network to another – locally, regionally and internationally. Routers and switches are the backbone of Internet traffic, routing packets of data as they are transported from sender to recipient. For example, the transmission of an email message from Dallas, Texas to Hong Kong will pass through multiple routers or switches as the packets of information comprising the message pass from one network to another. The science of routing packets of data through networks is complex and challenging and requires tremendous innovation and technological development to assure that messages are sent quickly and securely and arrive at their intended destination. As a pioneer in this area, Cisco has achieved widespread renown for the technological superiority, convenience and security of its routers, which in turn has facilitated the amazing growth of computer networks and the Internet.

11. Cisco came to its position of technological leadership by hard work and substantial research and development investment. As a result of its endeavors, Cisco has created valuable intellectual property in the form of patents, copyrights, trademarks and trade secrets that protect the valuable technology it has created. Cisco is the owner of a number of key patents covering the operation of its routers and the particularized manner in which they function. One of the core technologies contained in every Cisco router is called the Cisco Internetwork Operating System ("IOS Software Programs"), a proprietary computer program that manages the routing of packets through the router or switch. The IOS Software Programs are the product of countless man-hours of software design and programming by Cisco employees and contractors.

12. Defendants recently introduced for sale in the United States a line of routers referred to as "Quidway routers" which, on information and belief, it has promoted as operating virtually identically as Cisco routers but costing less than Cisco routers. On information and belief, Huawei sells the same or similar infringing routers in a number of foreign countries, the exact identities of which Cisco expects to learn through discovery. On information and belief, Defendants promote their Quidway routers by claiming they can replace a Cisco router without any loss of performance or security. While Defendants' claim of interoperability are dubious, it is apparent that in their attempt to produce a Cisco "clone," Defendants engaged

in wholesale theft of Cisco's intellectual property. That theft includes the adoption of Cisco's patented processes, the systematic copying of Cisco's copyrighted Command Line Interface, the copying of Cisco's proprietary IOS source code, and the systematic copying of Cisco's user manuals. Huawei's Vice President, Fei Min, recently admitted that "all the world's leading equipment suppliers are our learning models." The evidence shows unequivocally that the "learning" was in fact blatant copying and misappropriation, undertaken in complete disregard of Cisco's intellectual property rights.

Cisco's Copyright Protection.

13. Cisco Technology has duly recorded in the United States Copyright Office registrations protecting Cisco's IOS Software Programs, its Command Line Interface, and its User Manuals. Cisco Technology is the owner of the registered copyrights in each of the following computer programs and their corresponding user manuals, each of which substantially consists of original material (hereafter referred to as "Cisco's Copyrighted Works"). The following Cisco's Copyrighted Works consist of their respective computer code ("IOS Software Programs"), the Command Line Interface and corresponding screen displays ("CLI"), and the corresponding IOS user manuals ("IOS Manuals"):

a. Cisco Internetwork Operating System Version 11.0, Reg. No. TXu-1-036-057 (Ex. A)

b. Cisco Internetwork Operating System Version 11.1, Reg. No. TXu-1-048-569 (supplementing TX-5-531-435) (Ex. B)

c. Cisco Internetwork Operating System Version 11.2, Reg. No. TXu-1-036-063 (Ex. C)

d. Cisco Internetwork Operating System Version 11.3, Reg. No. TXu-1-036-062 (Ex. D)

e. Cisco Internetwork Operating System Version 12.0, Reg. No. TXu-1-036-064 (Ex. E)

f. Cisco Internetwork Operating System Version 12.1, Reg. No. TXu-1-036-066 (Ex. F)

g. Cisco Internetwork Operating System Version 12.2, Reg. No. TXu-1-036-065 (Ex. G)

14. For each of the foregoing works, Cisco Technology complied in all respects with the Copyright Act and all other laws of the United States governing copyrights, and has received Certificates of Registration from the Register of Copyrights.

Copying of Command Line Interface.

15. A key component of the copyrighted IOS Software Programs is the "Command Line Interface" or "CLI." The CLI is the user interface by which users of Cisco routers communicate with the routers. Just as a computer user must communicate instructions to a computer (e.g., copy a file), the Information Technology ("IT") manager must communicate with routers in order to configure and manage them. For Cisco routers the interaction between the IT manager and the router is facilitated by a unique Command Line Interface, an elaborate structure of textual commands that the IT manager must learn in order to "talk" to the router. Each command corresponds to a function that can be performed by the router. When the command is entered by the human operator, the router performs the function associated with that particular command.

16. Cisco's CLI is a unique, expressive work that has been developed over many years of creative endeavor. Other manufacturers of network routers have their own command line interfaces that differ from Cisco's, both in terms of the particular commands and in the organization of those commands. When developing a router interface, the software developer has a range of creative choices in deciding what textual commands to compose, the definitions assigned to the commands, and the overall structure of the interface. Cisco's CLI represents its own original expression of one way to provide this communication.

17. Defendants have engaged in wholesale copying of Cisco's CLI. Because the CLI can be visually observed during the operation of a router and is published in Cisco's user

manuals, Defendants would have had no difficulty in gaining access to the CLI. A comparison of the command line interface of the operating system for the Quidway routers, switches and other products that use VRP, and Cisco's CLI reveals repeated incidents of slavish copying. For example, the following chart shows two of the many areas in which commands were copied by Defendants.

CISCO'S IOS	**DEFENDANTS' VRP**
HSRP Commands	HSRP Commands
standby authentication	standby authentication
standby ip	standby ip
standby preempt	standby preempt
standby priority	standby priority
standby timers	standby timers
standby track	standby track
standby use-bia	standby use-bia
standby mac-address <address>	standby use-ovmac
show standby	show standby
debug standby	debug standby
PQ Commands	PQ Commands
priority-group	priority-group
priority-list default	priority-list default
priority-list interface	priority-list interface
priority-list protocol	priority-list protocol
priority-list queue-limit	priority-list queue-limit
show queuing priority	show queuing priority
debug priority-queue	debug priority

18. So much of the Cisco CLI is duplicated in the Defendants' interface that an IT manager familiar with the Cisco CLI would not have to be re-trained in order to operate one of Huawei's Quidway routers, switches or products that use VRP. As a result of its extensive copying of the Cisco CLI, Defendants can promote their Quidway routers, switches and products that use VRP by convincing Cisco customers that they will not have to learn a new command line interface if they purchase Defendants' products. On information and belief, Defendants have informed customers that IT managers familiar with Cisco routers will not need additional training to manage Defendants' products. As one Huawei distributor declared, he was "impressed by the ability of a Cisco-trained engineer to take a Huawei product out of the box and use it." By choosing copyright infringement over independent development, Defendants are attempting to compete with Cisco by stealing Cisco's innovations instead of creating their own as well as avoiding the process of training potential users in a separate interface.

Copying of IOS Source Code.

19. Cisco is informed and believes and therefore alleges that Defendants have copied substantial portions of the IOS Software Programs source code. The operating system for the Quidway routers is known as "VRP," which stands for Versatile Routing Platform. The VRP program contains telltale similarities to the IOS Software Programs indicating that Defendants had access to the proprietary IOS Software Programs source code and used some or all of the source code in the creation of VRP.

20. The IOS Software Programs source code contains thousands of "text strings," distinctive textual statements written into the software by the programmers to convey information about the tasks to be performed by the software. Software which is independently developed will have unique text strings organized in a unique sequence or order. An analysis of Defendants' VRP code reveals that it contains large portions of text strings that are identical or substantially similar to the text strings from the IOS Software Programs, both in terms of the phrasing of the text strings and the sequence in which they appear. This level of identicality cannot be explained by either coincidence or independent development on the part of Huawei. It

points inescapably to one conclusion: Defendants had access to Cisco's proprietary IOS source code and copied that source code in the creation of Defendants' VRP.

21. At various points in time, the IOS Software Programs have had minor bugs that do not affect the fundamental functions of the program but represent idiosyncratic ways in which the program was written. Because they stand as unusual anomalies, these bugs serve as telltale fingerprints if they appear in other computer programs. Just as a school teacher can determine copying from the existence of a shared mistake among student papers, Cisco has discovered the presence of a "bug" in the Defendants' VRP software, which can only be explained by Defendants' unlawful access to and use of the IOS Software Programs source code.

22. Cisco has never made its IOS source code available to Defendants nor has it ever authorized anyone else to do so. Cisco is informed and believes and therefore alleges that Defendants obtained access to Cisco's IOS source code or portions thereof by improper means, that Defendants had reason to know that the source code was confidential to Cisco, and that Defendants had reason to know that their access to the source code was not authorized by Cisco. On information and belief, Defendants have exercised dominion and control over Cisco's IOS source code, which is in the form of one or more computer files (i.e., one or more documents), in an unlawful and unauthorized manner to the exclusion of and inconsistent with Cisco's rights. Defendants' possession of Cisco's IOS source code is tantamount to a refusal after demand.

Copying of Cisco's User Manuals.

23. Cisco provides the IOS Manuals to its customers to assist them in the operation of Cisco's routers. These manuals describe in detail the operation of the Cisco routers, the CLI and how to configure the routers for use in network operation. Cisco has invested thousands of man-hours in the preparation of the IOS Manuals, each of which is protected from unlawful copying under the Copyright Laws of the United States and other countries.

24. Defendants make available to customers and prospective customers user manuals that explain the function of its Quidway routers, switches, and other products that use VRP. In creating Defendants' user manuals, Defendants have copied extensively from the IOS

Manuals. In many cases, Defendants have copied whole paragraphs of text from the IOS Manuals, sometimes changing a word here or there in an attempt to mask their flagrant plagiarism. Defendants also have copied the organization and structure of the IOS Manuals so that the overall appearance of Defendants' manuals is substantially similar to the IOS Manuals. Attached as Exhibit H is an example of Defendants' copying of Cisco's copyrighted user manuals.

Patent Infringement.

25. In addition to the unlawful conduct described above, Defendants also have infringed Cisco's patented processes and methods in their attempt to create a router that replicates the functionality of Cisco's routers. In particular, Defendants have infringed no less than five Cisco patents through their incorporation of patented and proprietary Cisco technology in Quidway routers, switches, and other network devices that use VRP. These infringements were blatant and willful and were part of Defendants' overall plan to misappropriate Cisco's technology.

Adoption of Cisco's Nomenclature and Model Numbers.

26. In addition to the theft of Cisco's technology, Defendants have taken steps to mislead customers into believing that their Quidway routers are comparable to and completely interchangeable with Cisco routers.

27. Defendants have adopted a product numbering scheme for their router products that is substantially the same as Cisco's numbering scheme. Defendants have adopted other Cisco nomenclature as well, such as Cisco's acronym for its security products (i.e., "SAFE"). Huawei refers to its security products as SAFE. The title Cisco applies to engineers who are certified in operating Cisco's routers, "Certified Cisco Internetworking Experts" or "CCIE" has also been appropriated by Defendants in their use of the term "Huawei Certified Internetworking Experts" or "HCIE." Given the wide range of model numbers and nomenclature from which Defendants could have chosen, their decision to mimic Cisco's naming conventions is further evidence of Defendants' unlawful scheme to knock off Cisco's technology and mislead

customers into believing that the products are interchangeable without any loss of performance, security or reliability.

V. COUNT ONE

(Patent Infringement—'032 Patent)

28. Plaintiff Cisco realleges and repeats the allegations of paragraphs 1 through 27 above.

29. On February 11, 1992, the United States Patent and Trademark Office duly and legally issued United States Letters Patent No. 5,088,032 (the "'032 patent") entitled "METHOD AND APPARATUS FOR ROUTING COMMUNICATIONS AMONG COMPUTER NETWORKS." Cisco Technology holds legal title to the '032 patent. By virtue of a license, Cisco Systems has all substantial rights in the '032 patent, including the right to sue for infringement of the '032 patent.

30. Defendants have been and are infringing the '032 patent within this district and elsewhere in the United States by making, using, selling, importing, distributing or offering for sale products that infringe one or more of the claims of the '032 patent.

31. Defendants are contributorily infringing the '032 patent within this district and elsewhere in the United States by making, using, selling, importing, distributing or offering for sale in the United States materials and/or apparatus for use in practicing the inventions set forth in the '032 patent, that they know to be especially made or especially adapted for use in infringement of the invention embodied in the '032 patent. On information and belief, these materials and/or apparatus have no substantial non-infringing use in commerce.

32. Defendants are inducing infringement of the '032 patent within this district and elsewhere in the United States by instructing in the use of materials and/or apparatus that infringe one or more of the claims of the '032 patent.

VI. COUNT TWO

(Patent Infringement—'599 Patent)

33. Plaintiff Cisco realleges and repeats the allegations of paragraphs 1 through 32 above.

34. On December 5, 1995, the United States Patent and Trademark Office duly and legally issued United States Letters Patent No. 5,473,599 (hereinafter the "'599 patent"), entitled "STANDBY ROUTER PROTOCOL." Cisco Technology holds legal title to the '599 patent. By virtue of a license, Cisco Systems has all substantial rights in the '599 patent, including the right to sue for infringement of the '599 patent.

35. Defendants have been and are infringing the '599 patent within this district and elsewhere in the United States by making, using, selling, importing, distributing or offering for sale products that infringe one or more of the claims of the '599 patent.

36. Defendants are contributorily infringing the '599 patent within this district and elsewhere in the United States by making, using, selling, importing, distributing or offering for sale in the United States materials and/or apparatus for use in practicing the inventions set forth in the '599 patent, that they know to be especially made or especially adapted for use in infringement of the inventions embodied in the '599 patent. On information and belief, these materials and/or apparatus have no substantial non-infringing use in commerce.

37. Defendants are inducing infringement of the '599 patent within this district and elsewhere in the United States by instructing in the use of materials and/or apparatus that infringe one or more of the claims of the '599 patent.

VII. COUNT THREE

(Patent Infringement—'704 Patent)

38. Plaintiff Cisco realleges and repeats the allegations of paragraphs 1 through 37 above.

39. On May 21, 1996, the United States Patent and Trademark Office duly and legally issued United States Letters Patent No. 5,519,704 (hereinafter the "'704 patent"), entitled

"RELIABLE TRANSPORT PROTOCOL FOR INTERNETWORK ROUTING." Cisco Technology holds legal title to the '704 patent. By virtue of a license, Cisco Systems has all substantial rights in the '704 patent, including the right to sue for infringement of the '704 patent.

40. Defendants have been and are infringing the '704 patent within this district and elsewhere in the United States by making, using, selling, importing, distributing or offering for sale products that infringe one or more of the claims of the '704 patent.

41. Defendants are contributorily infringing the '704 patent within this district and elsewhere in the United States by making, using, selling, importing, distributing or offering for sale in the United States materials and/or apparatus for use in practicing inventions set forth in the '704 patent, that they know to be especially made or especially adapted for use in infringement of the inventions embodied in the '704 patent. On information and belief, these materials and/or apparatus have no substantial non-infringing use in commerce.

42. Defendants are inducing infringement of the '704 patent within this district and elsewhere in the United States by instructing in the use of materials and/or apparatus that infringe one or more of the claims of the '704 patent.

VIII. COUNT FOUR

(Patent Infringement—'718 Patent)

43. Plaintiff Cisco realleges and repeats the allegations of paragraphs 1 through 42 above.

44. On August 1, 2000, the United States Patent and Trademark Office duly and legally issued United States Letters Patent No. 6,097,718 (hereinafter the "'718 patent"), entitled "SNAPSHOT ROUTING WITH ROUTE AGING." Cisco Technology holds legal title to the '718 patent. By virtue of a license, Cisco Systems has all substantial rights in the '718 patent, including the right to sue for infringement of the '718 patent.

45. Defendants have been and are infringing the '718 patent within this district and elsewhere in the United States by making, using, selling, importing, distributing or offering for sale products that infringe one or more of the claims of the '718 patent.

46. Defendants are contributorily infringing the '718 patent within this district and elsewhere in the United States by making, using, selling, importing, distributing or offering for sale in the United States materials and/or apparatus for use in practicing the inventions set forth in the '718 patent, that they know to be especially made or especially adapted for use in infringement of the inventions embodied in the '718 patent. On information and belief, these materials and/or apparatus have no substantial non-infringing use in commerce.

47. Defendants are inducing infringement of the '718 patent within this district and elsewhere in the United States by instructing in the use of materials and/or apparatus that infringe one or more of the claims of the '718 patent.

IX. COUNT FIVE

(Patent Infringement—'251 Patent)

48. Plaintiff Cisco realleges and repeats the allegations of paragraphs 1 through 47 above.

49. On December 4, 2001, the United States Patent and Trademark Office duly and legally issued United States Letters Patent No. 6,327,251 (hereinafter the "'251 patent"), entitled "SNAPSHOT ROUTING." Cisco Technology holds legal title to the '251 patent. By virtue of a license, Cisco Systems has all substantial rights in the '251 patent, including the right to sue for infringement of the '251 patent.

50. Defendants have been and are infringing the '251 patent within this district and elsewhere in the United States by making, using, selling, importing, distributing or offering for sale products that infringe one or more of the claims of the '251 patent.

51. Defendants are contributorily infringing the '251 patent within this district and elsewhere in the United States by making, using, selling, importing, distributing or offering for sale in the United States materials and/or apparatus for use in practicing the inventions set forth in the '251 patent, that they know to be especially made or especially adapted for use in infringement of the inventions embodied in the '251 patent. On information and belief, these materials and/or apparatus have no substantial non-infringing use in commerce.

52. Defendants are inducing infringement of the '251 patent within this district and elsewhere in the United States by instructing in the use of materials and/or apparatus that infringe one or more of the claims of the '251 patent.

X. COUNT SIX

(Copyright Infringement – IOS source code and CLI)

53. Cisco alleges and incorporates by reference the allegations in paragraphs 1 through 52 above.

54. Defendants have infringed and, unless enjoined in this action, will continue to infringe Cisco's Copyrighted Works by, among other things:

(a) Copying substantial portions of the code of the IOS Software Programs;

(b) Copying substantial portions of the CLI;

(c) Distributing works containing material copied from the IOS Software Programs and CLI; and

(d) Creating derivative works based on the IOS Software Programs and CLI.

55. Defendants' copying and distribution of the IOS Software Programs and CLI and the creation of unauthorized derivative works constitute willful infringement under the Copyright Act. By reason of Defendants' acts of infringement, Cisco has suffered and will continue to suffer, unless Defendants' infringement is enjoined, irreparable injury that cannot be adequately remedied at law. Because of such willful infringement, Cisco is entitled to enhanced damages and an award of its attorneys fees and costs pursuant to the Copyright Act.

56. Defendants' unauthorized copying and distribution of the IOS Software Programs and CLI and the creation of unauthorized derivative works constitute willful infringement under the copyright laws (or laws extending similar protection) of the foreign countries in which Defendants have copied, sold or distributed their infringing works. By reason of these acts of infringement, Cisco has suffered and will continue to suffer, unless Defendants'

infringement is enjoined, irreparable injury that cannot be adequately remedied at law. The exact foreign countries in which defendants have copied, sold or distributed their infringing works, and the extent of that illegal conduct, are not presently known to Cisco and can be learned only upon appropriate discovery from defendants. Cisco reserves the right, upon obtaining relevant discovery from defendants on their infringing conduct in foreign countries, to amend this Complaint to assert claims for violations of foreign copyright laws (or laws extending similar protection) and obtaining appropriate remedies for defendants' violations of those laws.

XI. COUNT SEVEN

(Copyright Infringement – IOS Manuals)

57. Cisco alleges and incorporates by reference the allegations in paragraphs 1 through 56 above.

58. Defendants have infringed and, unless enjoined in this action, will continue to infringe Cisco's Copyrighted Works by, among other things:

(a) Copying substantial portions of the IOS Manuals;

(b) Distributing works containing material copied from the IOS Manuals; and

(c) Creating derivative works based on the IOS Manuals.

59. Defendants' copying and distribution of the IOS Manuals and the creation of derivative works are not authorized by Cisco and constitute willful infringement under the Copyright Act. By reason of Defendants' acts of infringement, Cisco has suffered and will continue to suffer, unless Defendants' infringement is enjoined, irreparable injury that cannot be adequately remedied at law. Because of such willful infringement, Cisco is entitled to enhanced damages and an award of its attorneys' fees and costs pursuant to the Copyright Act.

60. Defendants' unauthorized copying and distribution of the IOS Manuals and the creation of derivative works constitute willful infringement under the copyright laws (or laws extending similar protection) of the foreign countries in which Defendants have copied, sold or distributed their infringing works. By reason of these acts of infringement, Cisco has

suffered and will continue to suffer, unless Defendants' infringement is enjoined, irreparable injury that cannot be adequately remedied at law. The exact foreign countries in which defendants have copied, sold or distributed their infringing works, and the extent of that illegal conduct, are not presently known to Cisco and can be learned only upon appropriate discovery from defendants. Cisco reserves the right, upon obtaining relevant discovery from defendants on their infringing conduct in foreign countries, to amend this Complaint to assert claims for violations of foreign copyright laws (or laws extending similar protection) and obtaining appropriate remedies for defendants' violations of those laws.

XII. COUNT EIGHT

(Trade Secret Misappropriation)

61. Cisco alleges and incorporates by reference the allegations of paragraphs 1 through 60 above.

62. Cisco maintains the source code to its IOS Software Programs as trade secrets and has taken reasonable measures to preserve the secrecy of the source code. The source code derives independent economic value from not being generally known to the public or to other persons who can obtain economic value from its disclosure or use.

63. On information and belief, Defendants have gained access to some or all of Cisco's IOS source code through improper means and/or a breach of a confidential relationship. Defendants gained such access with knowledge, or at least reason to know, that the source code is confidential to Cisco. Defendants lacked authorization to use the source code for any purpose.

64. On information and belief, Defendants misappropriated Cisco's trade secrets by making use of the IOS Software Programs source code in order to create their VRP operating system by, among other things, using the confidential source code to learn confidential information about the structure and operation of the IOS Software Programs, patterning their own development of VRP on what they learned from Cisco's confidential information, and copying portions of the source code for incorporation into the VRP operating system.

Defendants further misappropriated Cisco's trade secrets by, on information and belief, copying portions of the IOS Software Programs source code for incorporation into their VRP operating system.

65. These acts of misappropriation violate the laws of the State of Texas and the laws of other states in which acts of misappropriation have occurred. As a direct and proximate result of Defendants' misappropriation of Cisco's trade secrets, Defendants have been unjustly enriched and Cisco has sustained damages in an amount to be proved at trial. Cisco has also suffered irreparable injury as a result of Defendants' misappropriation and will continue to suffer irreparable injury that cannot be adequately remedied at law unless Defendants are enjoined from utilizing the fruits of their misappropriation or engaging in further acts of misappropriation.

66. Each of the acts of misappropriation was done willfully and maliciously by Defendants, entitling Cisco to punitive damages to be proved at trial.

67. Defendants' misappropriation of Cisco's trade secrets also constitutes violations of those laws protecting trade secrets in foreign countries in which Defendants have taken, used, disclosed or profited from Cisco's trade secrets. The identity of those foreign countries in which defendants have taken, used, disclosed or profited from Cisco's trade secrets, and the extent of such illegal conduct, are not presently known to Cisco and can be learned only through appropriate discovery from Defendants. Cisco reserves the right, upon obtaining relevant discovery from Defendants, to amend this complaint to assert claims for trade secret misappropriation and/or theft under the laws of foreign countries, and to obtain appropriate remedies for Defendants' illegal acts under the laws of foreign countries.

XIII. COUNT NINE

(Common Law Misappropriation)

68. Cisco alleges and incorporates by reference the allegations of paragraphs 1 through 67 above.

69. The CLI is a critical component of Cisco's business and represents enormous commercial value to the company. Cisco has invested substantial time and expense in the development of the CLI, a development effort that has entailed thousands of man hours of work spread over an extended period of time. Cisco also has invested substantial time and expense in training its customers on the use of the CLI.

70. By replicating the structure, organization and commands of CLI, Defendants have misappropriated the substantial commercial value of the CLI without the consent or authorization of Cisco.

71. By this misappropriation, Defendants are attempting to reap the benefits of Cisco's effort without committing the time and resources to independently develop an interface. Because they have avoided the expense of creating their own user interface, Defendants are able to price their routers at levels that would not be possible if Defendants were not obtaining a free ride on the basis of Cisco's efforts.

72. As a direct and proximate result of Defendants' misappropriation, Cisco has sustained damages in an amount to be proved at trial. Defendants' misappropriation has caused, and unless enjoined, will continue to cause, substantial competitive injury to Cisco.

XIV. COUNT TEN

(False Representation – Lanham Act § 43(a))

73. Cisco repeats and incorporates the allegations in paragraphs 1 through 72 above.

74. On information and belief, Defendants have represented to customers and prospective customers that their Quidway routers are interoperable with Cisco routers without any loss or performance, security or convenience. Such representations constitute a false and misleading characterization of the qualities and characteristics of Defendants' products in violation of Section 43(a) of the Lanham Act, 15 U.S.C. § 1125(a).

75. As a direct and proximate result of Defendants' misrepresentations of fact, Cisco has suffered and will continue to suffer irreparable injury unless Defendants are enjoined from engaging in their unlawful conduct.

76. As a direct and proximate result of Defendants' passing off, Cisco has suffered and will continue to suffer irreparable injury unless Defendants are enjoined from engaging in their unlawful conduct.

XV. COUNT ELEVEN

(Unfair Competition – Texas Common Law and Lanham Act § 44)

77. Cisco repeats and incorporates the allegations in paragraphs 1 through 76 above.

78. Defendants have engaged in unfair competition under Texas common law and under Lanham Act § 44 by, among other things, misappropriating Cisco's trade secrets, misappropriating the commercial value of the CLI, making false representations regarding the qualities and characteristics of their Quidway routers, making claims of "full intellectual property rights" under Cisco IP and mimicking Cisco's nomenclature and product numbering system to mislead customers and potential customers regarding the alleged interoperability of Quidway routers.

79. As a direct and proximate result of Defendants' acts of unfair competition, Defendants have been unjustly enriched and Cisco has sustained damages in an amount to be proved at trial. Cisco has also suffered irreparable injury as a result of Defendants' unfair competition and will continue to suffer irreparable injury unless Defendants are enjoined from utilizing the fruits of their unfair competition or engaging in further acts of unfair competition.

80. Each of the acts of unfair competition were done willfully and maliciously by Defendants, entitling Cisco to punitive damages to be proved at trial.

XVI. COUNT TWELVE

(Conversion)

81. Cisco repeats and incorporates the allegations in paragraphs 1 through 80 above.

82. On information and belief, Defendants converted Cisco's computer code by unlawfully acquiring possession of one or more computer files (i.e., one or more documents) containing Cisco's computer source code and exercising dominion and control over the computer source code in an unlawful and unauthorized manner to the exclusion of and inconsistent with Cisco's rights, tantamount to a refusal after demand.

83. As a direct and proximate result of Defendants' acts of conversion, Cisco has sustained damages in an amount to be proved at trial. Cisco has also suffered irreparable injury as a result of Defendants' conversion and will continue to suffer irreparable injury unless Defendants are enjoined from utilizing the fruits of their conversion.

84. Each of the acts of conversion were done willfully and maliciously by Defendants, entitling Cisco to punitive damages to be proved at trial.

XVII. DEMAND FOR TRIAL BY JURY

85. Cisco hereby demands a jury trial for all issues deemed to be triable by jury.

XVIII. PRAYER FOR RELIEF

WHEREFORE, Cisco respectfully requests that this Court enter judgment in its favor and against Defendants and grant the following relief:

A. A judgment that Defendants have infringed the patents in suit.

B. A judgment that Defendants' infringement of the patents in suit has been willful.

C. A preliminary and permanent injunction, pursuant to 35 U.S.C. § 283, enjoining Defendants, and all persons in active concert or participation with them, from any

further acts of infringement, contributory infringement or inducement of infringement of the patents in suit.

D. An order, pursuant to 35 U.S.C. § 284, awarding Cisco damages adequate to compensate Cisco for Defendants' infringement of the patents in suit, in an amount to be determined at trial, but in no event less than a reasonable royalty.

E. An order, pursuant to 35 U.S.C. § 284, trebling all damages awarded to Cisco based on Defendants' willful infringement of the patents in suit.

F. An order, pursuant to 35 U.S.C. § 285, finding that this is an exceptional case and awarding to Cisco its reasonable attorneys fees incurred in this action.

G. A preliminary and permanent injunction enjoining Defendants, and all persons in active concert or participation with them, from infringing or contributorily infringing Cisco's copyrights in the IOS Software Programs, CLI or IOS Manuals.

H. An order requiring Defendants to account for all gains, profits and advantage derived from their infringement of Cisco's Copyrighted Works.

I. An order awarding Cisco damages against Defendants equal in amount to the damages sustained by Cisco and the profits earned by Defendants from their infringement pursuant to 17 U.S.C. § 504(b).

J. An order awarding Cisco statutory damages pursuant to 17 U.S.C. § 504(c).

K. An order awarding Cisco its attorneys fees and costs on account of Defendants' infringement pursuant to 17 U.S.C. § 505.

L. An order requiring the impoundment and destruction of all routers, computer programs and manuals, or any version or modification thereof, found to constitute an infringement of Cisco's copyrights or trade secrets.

M. A preliminary and permanent injunction enjoining Defendants, and all persons in active concert or participation with them, from misappropriating or threatening to misappropriate Cisco's trade secrets or misappropriating the commercial value of the CLI.

N. A preliminary and permanent injunction enjoining Defendants, and all persons in active concert or participation with them, from making false and misleading statements regarding the performance, characteristics or interoperability of Defendants' Quidway routers.

O. A preliminary and permanent injunction enjoining Defendants, and all persons in active concert or participation with them, from using, selling, offering for sale, marketing, distributing or placing in interstate commerce their Quidway routers, switches, or other products that use VRP, and the VRP operating system itself.

P. An order awarding Cisco damages in an amount to be determined at trial arising from Defendants' trade secret misappropriation, common law misappropriation, false and misleading representations regarding their Quidway routers, switches, or other products that use VRP, and Defendants' unfair competition.

Q. An order requiring Defendants to disgorge all ill-gotten profits earned from their unlawful conduct, together with restitution to plaintiffs arising from Defendants' unlawful conduct.

R. An order awarding Cisco the unjust enrichment gained by Defendants from their unlawful conduct.

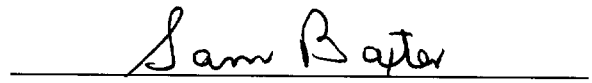
S. An order awarding Cisco punitive damages in an amount to be determined at trial on account of Defendants' wanton, willful and malicious tortious conduct.

T. An order awarding Cisco its attorneys fees and costs in this action.

U. Such other and further relief as this Court may deem just and proper.

Dated: January 22, 2003

Respectfully submitted,



Sam F. Baxter
Attorney-In-Charge for Plaintiff
State Bar No. 01938000

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Marshall, TX 75670
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OF COUNSEL:

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G. Hopkins Guy (Ca. State Bar No. 124811)
1000 Marsh Road
Menlo Park, CA 94025
Telephone: (650) 614-7400
Facsimile: (650) 614-7401

EXHIBIT A

CERTIFICATE OF REGISTRATION

FORM TX
For a Nondramatic Literary Work
UNITED STATES COPYRIGHT OFFICE

TXu 1-036-057

This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

Marybeth Peters
REGISTER OF COPYRIGHTS
United States of America

OFFICIAL SEAL

EFFECTIVE DATE OF REGISTRATION
JUN 14 2002
Month Day Year

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

1 TITLE OF THIS WORK ▼
Cisco IOS 11.0

PREVIOUS OR ALTERNATIVE TITLES ▼ Cisco IOS Release 11.0; Cisco IOS Version 11.0; Cisco Internetwork Operating System 11.0; Cisco Internetwork Operating System Release 11.0; Cisco Internetwork Operating System Version 11.0

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼ Number ▼ Issue Date ▼ On Pages ▼

2 a NAME OF AUTHOR ▼
Cisco Systems, Inc.

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☑ Yes ☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ ____ Domiciled in ▶ United States

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
If the answer to either of these questions is "Yes," see detailed instructions.
Anonymous? ☐ Yes ☑ No
Pseudonymous? ☐ Yes ☑ No

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼
New and revised computer code and accompanying documentation

NOTE
Under the law, the "author" of a "work made for hire" is generally the employer, not the employee (see instructions). For any part of this work that was "made for hire" check "Yes" in the space provided, give the employer (or other person for whom the work was prepared) as "Author" of that part, and leave the space for dates of birth and death blank.

b NAME OF AUTHOR ▼
See Attached Form TX/CON for Additional Authors

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes ☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ ____ Domiciled in ▶ ____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
If the answer to either of these questions is "Yes," see detailed instructions.
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

c NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes ☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ ____ Domiciled in ▶ ____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
If the answer to either of these questions is "Yes," see detailed instructions.
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

3 a YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED
1995 ◀ Year
This information must be given in all cases.

b DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK
Complete this information ONLY if this work has been published.
Month ▶ ____ Day ▶ ____ Year ▶ ____
◀ Nation

4 COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼
Cisco Technology, Inc.
170 West Tasman Drive
San Jose, CA 95134

See instructions before completing this space.

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼
By agreement

DO NOT WRITE HERE OFFICE USE ONLY

APPLICATION RECEIVED
JUN 14 2002

ONE DEPOSIT RECEIVED
JUN 14 2002

TWO DEPOSITS RECEIVED

FUNDS RECEIVED

MORE ON BACK ▶ • Complete all applicable spaces (numbers 5–9) on the reverse side of this page. • See detailed instructions. • Sign the form at line 8.

DO NOT WRITE HERE
Page 1 of 4 pages

EXAMINED BY TMB FORM TX

CHECKED BY

☐ CORRESPONDENCE Yes

FOR COPYRIGHT OFFICE USE ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office? **5**

☐ Yes ☑ No If your answer is "Yes," why is another registration being sought? (Check appropriate box.) ▼

a. ☐ This is the first published edition of a work previously registered in unpublished form.

b. ☐ This is the first application submitted by this author as copyright claimant.

c. ☐ This is a changed version of the work, as shown by space 6 on this application.

If your answer is "Yes," give: Previous Registration Number ▶ Year of Registration ▶

DERIVATIVE WORK OR COMPILATION **6**

Preexisting Material Identify any preexisting work or works that this work is based on or incorporates. ▼ a

Prior works by claimant and preexisting third party computer code

See instructions before completing this space.

Material Added to This Work Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼ b

New and revised computer code and accompanying documentation

DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account. **7**

Name ▼ Account Number ▼ a

CORRESPONDENCE Give name and address to which correspondence about this application should be sent. Name/Address/Apt/City/State/ZIP ▼ b

Tu T. Tsao, Esq.
Fenwick & West LLP
2 Palo Alto Square
Palo Alto, CA 94306

Area code and daytime telephone number ▶ (650) 858-7696 Fax number ▶ (650) 494-1417

Email ▶ ttsao@fenwick.com

CERTIFICATION* I, the undersigned, hereby certify that I am the **8**

Check only one ▶
- ☐ author
- ☐ other copyright claimant
- ☐ owner of exclusive right(s)
- ☑ authorized agent of Cisco Technology, Inc.

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name and date ▼ If this application gives a date of publication in space 3, do not sign and submit it before that date.

Robert A. Barr, Worldwide Patent Counsel Date ▶

Handwritten signature (X) ▼

X

Certificate will be mailed in window envelope to this address:

Name ▼
Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼
2 Palo Alto Square

City/State/ZIP ▼
Palo Alto, CA 94306

9

YOU MUST
- Complete all necessary spaces
- Sign your application in space 8

SEND ALL 3 ELEMENTS IN THE SAME PACKAGE
1. Application form
2. Nonrefundable filing fee in check or money order payable to *Register of Copyrights*
3. Deposit material

MAIL TO
Library of Congress
Copyright Office
101 Independence Avenue, S.E.
Washington, D.C. 20559-6000

As of July 1, 1999, the filing fee for Form TX is $30.

*17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than $2,500.

June 1999—200,000
WEB REV: June 1999

☆U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49

CONTINUATION SHEET FOR APPLICATION FORMS

- This Continuation Sheet is used in conjunction with Forms CA, PA, SE, SR, TX, and VA, only. Indicate which basic form you are continuing in the space in the upper right-hand corner.
- If at all possible, try to fit the information called for into the spaces provided on the basic form.
- If you do not have enough space for all the information you need to give on the basic form, use this Continuation Sheet and submit it with the basic form.
- If you submit this Continuation Sheet, clip (do not tape or staple) it to the basic form and fold the two together before submitting them.
- **Space A of this sheet is intended to identify the basic application.**
  Space B is a continuation of Space 2 on the basic application. Space B is not applicable to Short forms.
  Space C (on the reverse side of this sheet) is for the continuation of Spaces 1, 4, or 6 on the basic application or for the continuation of Space 1 on any of the three Short Forms PA, TX, or VA.

FORM TX /CON
UNITED STATES COPYRIGHT OFFICE

TXu 1-036-057

PA	PAU	SE	SEG	SEU	SR	SRU	TX	TXU	VA	VAU

EFFECTIVE DATE OF REGISTRATION

JUN 14 2002
(Month) (Day) (Year)

CONTINUATION SHEET RECEIVED
JUN. 14. 2002

Page 3 of 4 pages

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A Identification of Application

IDENTIFICATION OF CONTINUATION SHEET: This sheet is a continuation of the application for copyright registration on the basic form submitted for the following work:

- TITLE: (Give the title as given under the heading "Title of this Work" in Space 1 of the basic form.)
  Cisco IOS 11.0
- NAME(S) AND ADDRESS(ES) OF COPYRIGHT CLAIMANT(S): (Give the name and address of at least one copyright claimant as given in Space 4 of the basic form or Space 2 of any of the Short Forms PA, TX, or VA.)
  Cisco Technology, Inc., 170 West Tasman Drive, San Jose, CA 95134

B Continuation of Space 2

d

NAME OF AUTHOR ▼
(See Space C)

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ _____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

e

NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ _____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

f

NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ _____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

Use the reverse side of this sheet if you need more space for continuation of Spaces 1, 4, or 6 of the basic form or for the

CONTINUATION OF (Check which): ☐ Space 1 ☐ Space 4 ☐ Space 6 ☑ Space 2b

C

Continuation of other Spaces

Name of Author	Work for Hire	Domicile	Anonymous	Pseudonymous	Nature of Contribution
ABE Staffing, Inc.	Yes	United States	Yes	No	Computer code
Metaplex, Inc.	Yes	United States	Yes	No	Computer code
Nano Solutions	Yes	United States	Yes	No	Documentation
Bev Talbott	No	United States	Yes	No	Documentation

Certificate will be mailed in window envelope to this address:

Name ▼
Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼
2 Palo Alto Square

City/State/ZIP ▼
Palo Alto, CA 94306

YOU MUST
- Complete all necessary spaces
- Sign your application

SEND ALL 3 ELEMENTS IN THE SAME PACKAGE
1. Application form
2. Nonrefundable fee in check or money order payable to *Register of Copyrights*
3. Deposit Material

MAIL TO
Library of Congress, Copyright Office
101 Independence Avenue, S.E.
Washington, D.C. 20559-6000

D

Fees are effective through June 30, 2002. After that date, check the Copyright office Website at www.loc.gov/copyright or call (202) 707-3000 for current fee information.

EXHIBIT B

CERTIFICATE OF REGISTRATION

FORM CA
For Supplementary Registration
UNITED STATES COPYRIGHT OFFICE

REGISTRATION NUMBER

TXu 1-048-569

EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

Aug. 20, 2002
Month Day Year

OFFICIAL SEAL

This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

Marybeth Peters

REGISTER OF COPYRIGHTS
United States of America

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

A

Title of Work ▼
Cisco IOS 11.1

Registration Number of the Basic Registration ▼
TX 5-531-435

Year of Basic Registration ▼
2002

Name(s) of Author(s) ▼
Cisco Systems, Inc.

Name(s) of Copyright Claimant(s) ▼
Cisco Technology, Inc.

B

Location and Nature of Incorrect Information in Basic Registration ▼

Line Number 3b Line Heading or Description Date and Nation of First Publication of this Particular Work

Incorrect Information as It Appears in Basic Registration ▼
February 28, 1996; United States

Corrected Information ▼
N/A (please delete)

Explanation of Correction ▼
The work is unpublished.

C

Location and Nature of Information in Basic Registration to be Amplified ▼

Line Number Line Heading or Description

Amplified Information and Explanation of Information ▼

MORE ON BACK ▶ • Complete all applicable spaces (D-G) on the reverse side of this page. • See detailed instructions. • Sign the form at Space F.

DO NOT WRITE HERE
Page 1 of ____ pages

FORM CA RECEIVED

AUG 20 2002

FUNDS RECEIVED DATE

AUG 20 2002

EXAMINED BY TMS

CORRESPONDENCE ☐

REFERENCE TO THIS REGISTRATION ADDED TO BASIC REGISTRATION ☒ YES ☐ NO

FORM CA

FOR COPYRIGHT OFFICE USE ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: ☒ Part B or ☐ Part C

D

Line Number: 5 Line Heading or Description: Previous Registration

Incorrect Information as It Appears in Basic Registration: Box C unchecked

Corrected Information: Box C checked

Explanation of Correction: This work is a changed version.

Line Number: 2b Line Heading or Description: Name of Author

Incorrect Information as It Appears in Basic Registration: No entry

Corrected Information: See Attached Form TX/CON for Additional Authors

Explanation of Correction: Additional authors on Form TX/CON

E

Correspondence: Give name and address to which correspondence about this application should be sent.

Tu T. Tsao, Esq.
Fenwick & West LLP
2 Palo Alto Square
Palo Alto, CA 94306

Phone (650) 858-7696 Fax (650) 494-1417 Email ttsao@fenwick.com

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

F

Certification* I, the undersigned, hereby certify that I am the: (Check only one)

☐ author ☐ owner of exclusive right(s)
☐ other copyright claimant ☒ duly authorized agent of Cisco Technology, Inc.
Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name ▼ Tu T. Tsao Date ▼ 8/19/75

Handwritten signature (X) ▼

G

Certificate will be mailed in window envelope to this address:

Name ▼ Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼ 2 Palo Alto Square

City/State/ZIP ▼ Palo Alto, CA 94306

YOU MUST
- Complete all necessary spaces
- Sign your application in Space F

SEND ALL ELEMENTS IN THE SAME PACKAGE
1. Application form
2. Nonrefundable filing fee in check or money order payable to Register of Copyrights

MAIL TO
Library of Congress
Copyright Office
101 Independence Avenue, S.E.
Washington, D.C. 20559-6000

Fees are subject to change. For current fees, check the Copyright Office website at www.copyright.gov or write the Copyright Office, or call (202) 707-3000.

*17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than $2,500.

Rev: June 2002—20,000 Web Rev: June 2002 ● Printed on recycled paper

U.S. Government Printing Office: 2000-461-113/20,021

CERTIFICATE OF REGISTRATION

FORM TX
For a Nondramatic Literary Work
UNITED STATES COPYRIGHT OFFICE

TX 5-531-435

TX TXU

EFFECTIVE DATE OF REGISTRATION
JUN 14 2002
Month Day Year

UNITED STATES COPYRIGHT OFFICE • THE LIBRARY OF CONGRESS •

OFFICIAL SEAL

This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

Marybeth Peters
REGISTER OF COPYRIGHTS
United States of America

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

1 TITLE OF THIS WORK ▼
Cisco IOS 11.1

PREVIOUS OR ALTERNATIVE TITLES ▼ Cisco IOS Release 11.1; Cisco IOS Version 11.1; Cisco Internetwork Operating System 11.1; Cisco Internetwork Operating System Release 11.1; Cisco Internetwork Operating System Version 11.1

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼ Number ▼ Issue Date ▼ On Pages ▼

2 a NAME OF AUTHOR ▼
Cisco Systems, Inc.

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☑ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ ____
Domiciled in ▶ United States

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☑ No
Pseudonymous? ☐ Yes ☑ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼
New and revised computer code

NOTE Under the law, the "author" of a "work made for hire" is generally the employer, not the employee (see instructions). For any part of this work that was "made for hire" check "Yes" in the space provided, give the employer (or other person for whom the work was prepared) as "Author" of that part, and leave the space for dates of birth and death blank.

b NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ ____
Domiciled in ▶ ____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
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NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

c NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ ____
Domiciled in ▶ ____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

3 a YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED
1996 ◀ Year
This information must be given in all cases.

b DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK
Complete this information ONLY if this work has been published.
Month ▶ February Day ▶ 28 Year ▶ 1996
United States ◀ Nation

4 COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼
Cisco Technology, Inc.
170 West Tasman Drive
San Jose, CA 95134

See instructions before completing this space.

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼
By agreement

DO NOT WRITE HERE OFFICE USE ONLY

APPLICATION RECEIVED
JUN 14 2002 July 16, 2002

ONE DEPOSIT RECEIVED
JUN 14 2002

TWO DEPOSITS RECEIVED

FUNDS RECEIVED

MORE ON BACK ▶ • Complete all applicable spaces (numbers 5-9) on the reverse side of this page. • See detailed instructions. • Sign the form at line 8.

DO NOT WRITE HERE
Page 1 of 4 pages

EXAMINED BY TMS | FORM TX

CHECKED BY

CORRESPONDENCE ☐ Yes | FOR COPYRIGHT OFFICE USE ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office? ☐ Yes ☐ No If your answer is "Yes," why is another registration being sought? (Check appropriate box.) ▼ **5**

a. ☐ This is the first published edition of a work previously registered in unpublished form.
b. ☐ This is the first application submitted by this author as copyright claimant.
c. ☐ This is a changed version of the work, as shown by space 6 on this application.

If your answer is "Yes," give: Previous Registration Number ▶ Pending | Year of Registration ▶ 2002

DERIVATIVE WORK OR COMPILATION **a** **6**

Preexisting Material Identify any preexisting work or works that this work is based on or incorporates. ▼

Prior works by claimant and preexisting third party computer code

See instructions before completing this space.

Material Added to This Work: Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼ **b**

New and revised computer code

DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account. **a** **7**

Name ▼ | Account Number ▼

CORRESPONDENCE Give name and address to which correspondence about this application should be sent. Name/Address/Apt/City/State/ZIP ▼ **b**

Tu T. Tuso, Esq.
Fenwick & West LLP
2 Palo Alto Square
Palo Alto, CA 94306

Area code and daytime telephone number ▶ (650) 858-7696 | Fax number ▶ (650) 494-1417

Email ▶ ttuso@fenwick.com

CERTIFICATION* I, the undersigned, hereby certify that I am the **8**

Check only one ▶
☐ author
☐ other copyright claimant
☐ owner of exclusive right(s)
☑ authorized agent of Cisco Technology, Inc.
Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name and date ▼ If this application gives a date of publication in space 3, do not sign and submit it before that date.

Robert A. Barr, Worldwide Patent Counsel | Date ▶

Handwritten signature (X) ▼

X

Certificate will be mailed in window envelope to this address: **9**

Name ▼
Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼
2 Palo Alto Square

City/State/ZIP ▼
Palo Alto, CA 94306

- Complete all necessary spaces
- Sign your application in space 8

1. Application form
2. Nonrefundable filing fee in check or money order payable to Register of Copyrights
3. Deposit material

Mail to: Library of Congress, Copyright Office, 101 Independence Avenue, S.E., Washington, D.C. 20559-6000

As of July 1, 2002, the filing fee for Form TX is $30.

*17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than $2,500.

June 1997—200,000
WEB REV: June 1999

●U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/60

CONTINUATION SHEET FOR APPLICATION FORMS

- This Continuation Sheet is used in conjunction with Forms CA, PA, SE, SR, TX, and VA, only. Indicate which basic form you are continuing in the space in the upper right-hand corner.
- If at all possible, try to fit the information called for into the spaces provided on the basic form.
- If you do not have enough space for all the information you need to give on the basic form, use this Continuation Sheet and submit it with the basic form.
- If you submit this Continuation Sheet, clip (do not tape or staple) it to the basic form and fold the two together before submitting them.
- Space A of this sheet is intended to identify the basic application. Space B is a continuation of Space 2 on the basic application. Space B is not applicable to Short forms.
  Space C (on the reverse side of this sheet) is for the continuation of Spaces 1, 4, or 6 on the basic application or for the continuation of Space 1 on any of the three Short Forms PA, TX, or VA.

FORM TX /CON
UNITED STATES COPYRIGHT OFFICE

R

TX 5-531-435

PA	PAU	SE	SEG	SEU	SR	SRU	TX	TXU	VA	VAU

EFFECTIVE DATE OF REGISTRATION
JUN 1 4 2002
(Month) (Day) (Year)

CONTINUATION SHEET RECEIVED
JUN 1 4 2002

Page 3 of 4 pages

DO NOT WRITE ABOVE THIS LINE. FOR COPYRIGHT OFFICE USE ONLY

A Identification of Application

IDENTIFICATION OF CONTINUATION SHEET: This sheet is a continuation of the application for copyright registration on the basic form submitted for the following work:

- TITLE: (Give the title as given under the heading "Title of this Work" in Space 1 of the basic form.)
  Cisco IOS 11.1
- NAME(S) AND ADDRESS(ES) OF COPYRIGHT CLAIMANT(S): (Give the name and address of at least one copyright claimant as given in Space 4 of the basic form or Space 2 of any of the Short Forms PA, TX, or VA.)
  Cisco Technology, Inc., 170 West Tasman Drive, San Jose, CA 95134

B Continuation of Space 2

d

NAME OF AUTHOR ▼
(See Space C)

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ ____ / Domiciled in ▶ ____ }

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

e

NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ ____ / Domiciled in ▶ ____ }

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

f

NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ ____ / Domiciled in ▶ ____ }

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

Use the reverse side of this sheet if you need more space for continuation of Spaces 1, 4, or 6 of the basic form or for the continuation of Space 1 on any of the Short Forms PA, TX, or VA.

CONTINUATION OF (Check which): ☐ Space 1 ☐ Space 4 ☐ Space 6 ☑ Space 2b

C

Continuation of other Spaces

Name of Author	Work for Hire	Domicile	Anonymous	Pseudonymous	Nature of Contribution
Energetic Systems	Yes	United States	Yes	No	Computer code
Metaplex, Inc.	Yes	United States	Yes	No	Computer code
Nano Solutions	Yes	United States	Yes	No	Documentation
Bev Talbott	No	United States	Yes	No	Documentation

Certificate will be mailed in window envelope to this address:

Name ▼
Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼
2 Palo Alto Square

City/State/ZIP ▼
Palo Alto, CA 94306

YOU MUST
- Complete all necessary spaces
- Sign your application

SEND ALL 3 ELEMENTS IN THE SAME PACKAGE
1. Application form
2. Nonrefundable fee in check or money order payable to Register of Copyrights
3. Deposit Material

MAIL TO
Library of Congress, Copyright Office
101 Independence Avenue, S.E.
Washington, D.C. 20559-6000

D

Fees are effective through June 30, 2002. After that date, check the Copyright office Website at www.loc.gov/copyright or call (202) 707-3000 for current fee information.

PRINTED ON RECYCLED PAPER

☆U.S.GOVERNMENT PRINTING OFFICE: 2000-461-113/78

EXHIBIT C

CERTIFICATE OF REGISTRATION

FORM TX
Nondramatic Literary Work
UNITED STATES COPYRIGHT OFFICE

This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

REGISTER OF COPYRIGHTS
United States of America

OFFICIAL SEAL

TXu 1-036-063

EFFECTIVE DATE OF REGISTRATION
JUN 14 2002
Month Day Year

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

1 TITLE OF THIS WORK ▼
Cisco IOS 11.2

PREVIOUS OR ALTERNATIVE TITLES ▼ Cisco IOS Release 11.2; Cisco IOS Version 11.2; Cisco Internetwork Operating System 11.2; Cisco Internetwork Operating System Release 11.2; Cisco Internetwork Operating System Version 11.2

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼ Number ▼ Issue Date ▼ On Pages ▼

2 a NAME OF AUTHOR ▼
Cisco Systems, Inc.

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☑ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ United States

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
If the answer to either of these questions is "Yes," see detailed instructions.
Anonymous? ☐ Yes ☑ No
Pseudonymous? ☐ Yes ☑ No

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼
New and revised computer code and accompanying documentation

NOTE
Under the law, the "author" of a "work made for hire" is generally the employer, not the employee (see instructions). For any part of this work that was "made for hire" check "Yes" in the space provided, give the employer (or other person for whom the work was prepared) as "Author" of that part, and leave the space for dates of birth and death blank.

b NAME OF AUTHOR ▼
See Attached Form TX/CON for Additional Authors

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ _____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
If the answer to either of these questions is "Yes," see detailed instructions.
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

c NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ _____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
If the answer to either of these questions is "Yes," see detailed instructions.
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

3 a YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED
1996 ◀ Year
This information must be given in all cases.

b DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK
Complete this information ONLY if this work has been published.
Month ▶ _____ Day ▶ _____ Year ▶ _____
◀ Nation

4 COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼
Cisco Technology, Inc.
170 West Tasman Drive
San Jose, CA 95134

See instructions before completing this space.

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼
By agreement

DO NOT WRITE HERE OFFICE USE ONLY

APPLICATION RECEIVED
JUN 14 2002

ONE DEPOSIT RECEIVED
JUN 14 2002

TWO DEPOSITS RECEIVED

FUNDS RECEIVED

MORE ON BACK ▶ • Complete all applicable spaces (numbers 5-9) on the reverse side of this page. • See detailed instructions. • Sign the form at line 8.

DO NOT WRITE HERE
Page 1 of 4 pages

EXAMINED BY TMS

FORM TX

CHECKED BY

☐ CORRESPONDENCE Yes

FOR COPYRIGHT OFFICE USE ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office? **5**

☑ Yes ☐ No If your answer is "Yes," why is another registration being sought? (Check appropriate box.) ▼

a. ☐ This is the first published edition of a work previously registered in unpublished form.

b. ☐ This is the first application submitted by this author as copyright claimant.

c. ☑ This is a changed version of the work, as shown by space 6 on this application.

If your answer is "Yes," give: Previous Registration Number ▶ Pending Year of Registration ▶ 2002

DERIVATIVE WORK OR COMPILATION **a** **6**

Preexisting Material Identify any preexisting work or works that this work is based on or incorporates. ▼

Prior works by claimant and preexisting third party computer code

See instructions before completing this space.

Material Added to This Work Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼ **b**

New and revised computer code and accompanying documentation

DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account. **a** **7**

Name ▼ Account Number ▼

CORRESPONDENCE Give name and address to which correspondence about this application should be sent. Name/Address/Apt/City/State/ZIP ▼ **b**

Tu T. Tsao, Esq.
Fenwick & West LLP
2 Palo Alto Square
Palo Alto, CA 94306

Area code and daytime telephone number ▶ (650) 858-7696 Fax number ▶ (650) 494-1417

Email ▶ ttsao@fenwick.com

CERTIFICATION* I, the undersigned, hereby certify that I am the **8**

Check only one ▶
- ☐ author
- ☐ other copyright claimant
- ☐ owner of exclusive right(s)
- ☑ authorized agent of Cisco Technology, Inc.

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name and date ▼ If this application gives a date of publication in space 3, do not sign and submit it before that date.

Robert A. Barr, Worldwide Patent Counsel Date ▶

Handwritten signature (X) ▼

X _____

Certificate will be mailed in window envelope to this address:

Name ▼
Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼
2 Palo Alto Square

City/State/ZIP ▼
Palo Alto, CA 94306

9

YOU MUST:
- Complete all necessary spaces
- Sign your application in space 8

SEND ALL ELEMENTS IN THE SAME PACKAGE:
1. Application form
2. Nonrefundable filing fee in check or money order payable to *Register of Copyrights*
3. Deposit material

MAIL TO:
Library of Congress
Copyright Office
101 Independence Avenue, S.E.
Washington, D.C. 20559-6000

As of July 1, 1999, the filing fee for Form TX is $30.

*17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 408, or in any written statement filed in connection with the application, shall be fined not more than $2,500.

PRINTED ON RECYCLED PAPER

June 1999—200,000
WEB REV: June 1999

★U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49

CONTINUATION SHEET FOR APPLICATION FORMS

- This Continuation Sheet is used in conjunction with Forms CA, PA, SE, SR, TX, and VA, only. Indicate which basic form you are continuing in the space in the upper right-hand corner.
- If at all possible, try to fit the information called for into the spaces provided on the basic form.
- If you do not have enough space for all the information you need to give on the basic form, use this Continuation Sheet and submit it with the basic form.
- If you submit this Continuation Sheet, clip (do not tape or staple) it to the basic form and fold the two together before submitting them.
- **Space A of this sheet is intended to identify the basic application.**
  Space B is a continuation of Space 2 on the basic application. Space B is not applicable to Short forms.
  Space C (on the reverse side of this sheet) is for the continuation of Spaces 1, 4, or 6 on the basic application or for the continuation of Space 1 on any of the three Short Forms PA, TX, or VA.

FORM TX /CON
UNITED STATES COPYRIGHT OFFICE

TXu 1-036-063

PA	PAU	SE	SEG	SEU	SR	SRU	TX	TXU	VA	VAU

EFFECTIVE DATE OF REGISTRATION

JUN 1 4 2002
(Month) (Day) (Year)

CONTINUATION SHEET RECEIVED
JUN 1 4 2002

Page 3 of 4 pages

DO NOT WRITE ABOVE THIS LINE. FOR COPYRIGHT OFFICE USE ONLY

A Identification of Application

IDENTIFICATION OF CONTINUATION SHEET: This sheet is a continuation of the application for copyright registration on the basic form submitted for the following work:

- TITLE: (Give the title as given under the heading "Title of this Work" in Space 1 of the basic form.)
  Cisco IOS 11.2
- NAME(S) AND ADDRESS(ES) OF COPYRIGHT CLAIMANT(S): (Give the name and address of at least one copyright claimant as given in Space 4 of the basic form or Space 2 of any of the Short Forms PA, TX, or VA.)
  Cisco Technology, Inc., 170 West Tasman Drive, San Jose, CA 95134

B Continuation of Space 2

d

NAME OF AUTHOR ▼
(See Space C)

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ _____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

e

NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ _____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

f

NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

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☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ _____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

Use the reverse side of this sheet if you need more space for continuation of Spaces 1, 4, or 6 of the basic form or for the

CONTINUATION OF (Check which): ☐ Space 1 ☐ Space 4 ☐ Space 6 ☑ Space 2b

C

Continuation of other Spaces

Name of Author	Work for Hire	Domicile	Anonymous	Pseudonymous	Nature of Contribution
ABE Staffing Services, Inc.	Yes	United States	Yes	No	Computer code
HCL America, Inc.	Yes	United States	Yes	No	Computer code
HCL Consulting Limited	Yes	India	Yes	No	Computer code
Network Aware, Inc.	Yes	United States	Yes	No	Computer code
Metaplex, Inc.	Yes	United States	Yes	No	Computer code
Nano Solutions	Yes	United States	Yes	No	Documentation
NSA	Yes	United States	Yes	No	Documentation
Oakhill Publications/ Computer Education Consulting	Yes	United States	Yes	No	Documentation
Rick Barron	No	United States	Yes	No	Documentation
Bev Talbott	No	United States	Yes	No	Documentation

Certificate will be mailed in window envelope to this address:

Name ▼
Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼
2 Palo Alto Square

City/State/ZIP ▼
Palo Alto, CA 94306

YOU MUST
- Complete all necessary spaces
- Sign your application

SEND ALL 3 ELEMENTS IN THE SAME PACKAGE
1. Application form
2. Nonrefundable fee in check or money order payable to *Register of Copyrights*
3. Deposit Material

MAIL TO
Library of Congress, Copyright Office
101 Independence Avenue, S.E.
Washington, D.C. 20559-6000

D

Fees are effective through June 30, 2002. After that date, check the Copyright office Website at www.loc.gov/copyright or call (202) 707-3000 for current fee information.

November 1999–30,000 PRINTED ON RECYCLED PAPER

☆U.S. GOVERNMENT PRINTING OFFICE: 2000-461-113/78

EXHIBIT D

Copyright Office fees are subject to change. For current fees, check the Copyright Office website at *www.copyright.gov*, write the Copyright Office, or call (202) 707-3000.

FORM CA

For Supplementary Registration
UNITED STATES COPYRIGHT OFFICE

REGISTRATION NUMBER

TX	TXU	PA	PAU	VA	VAU	SR	SRU	RE

EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

Month Day Year

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

A

Title of Work ▼
Cisco IOS 11.3

Registration Number of the Basic Registration ▼	Year of Basic Registration ▼
TXu 1-036-062	2002
Name(s) of Author(s) ▼	**Name(s) of Copyright Claimant(s) ▼**
Please see Space D for list of author names	Cisco Technology, Inc.

B

Location and Nature of Incorrect Information in Basic Registration ▼

Line Number 2a Line Heading or Description Name of Author

Incorrect Information as It Appears in Basic Registration ▼

Cisco Systems, Inc.

Corrected Information ▼

Cisco Systems Sales & Services, Inc.

Explanation of Correction ▼

correct name of author

C

Location and Nature of Information in Basic Registration to be Amplified ▼

Line Number 2b and C Line Heading or Description Name of Author

Amplified Information and Explanation of Information ▼

Please add to the following to the list of authors:

Name of Author: Cisco Technology, Inc.
Work for Hire: Yes
Domicile: United States
Anonymous: No
Pseudonymous: No
Nature of Contribution: Computer code and documentation

FORM CA RECEIVED FORM CA

FUNDS RECEIVED DATE

EXAMINED BY

CORRESPONDENCE ☐

REFERENCE TO THIS REGISTRATION ADDED TO BASIC REGISTRATION ☐ YES ☐ NO

FOR COPYRIGHT OFFICE USE ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: ☐ Part B *or* ☐ Part C ☑ Part A

D

Cisco Systems, Inc.
HCL America, Inc.
HCL Consulting Limited
Metaplex, Inc.
Technosoft Corp.
Nano Solutions
Oakhill Publications / Computer Education Consulting
ABE Staffing Services, Inc.
Lasselle-Ramsay
Kevin Shafer
Rick Barron

E

Correspondence: Give name and address to which correspondence about this application should be sent.

Tu T. Tsao, Esq.
Fenwick & West LLP
801 California Street
Mountain View, CA 94041

Phone (650) 335-7696 Fax (650) 938-5200 Email ttsao@fenwick.com

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

F

Certification* I, the undersigned, hereby certify that I am the: (Check only one)

☐ author ☐ owner of exclusive right(s)
☐ other copyright claimant ☑ duly authorized agent of Cisco Technology, Inc.
Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name ▼ Robert A. Barr, Worldwide Patent Counsel Date ▼ 1/8/03

Handwritten signature (X) ▼

G

Certificate will be mailed in window envelope to this address:

Name ▼
Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼
801 California Street

City/State/ZIP ▼
Mountain View, CA 94041

YOU MUST
• Complete all necessary spaces
• Sign your application in Space F

SEND ALL ELEMENTS IN THE SAME PACKAGE
1. Application form
2. Nonrefundable filing fee in check or money order payable to *Register of Copyrights*
3. Deposit material

MAIL TO
Library of Congress
Copyright Office
101 Independence Avenue, S.E.
Washington, D.C. 20559-6000

Fees are subject to change. For current fees, check the Copyright Office website at www.copyright.gov, write the Copyright Office, or call (202) 707-3000.

*17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than $2,500.

CERTIFICATE OF REGISTRATION

FORM TX
For Nondramatic Literary Work
UNITED STATES COPYRIGHT OFFICE

TXu 1-036-062

EFFECTIVE DATE OF REGISTRATION
JUN 14 2002
Month Day Year

This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

Marybeth Peters
REGISTER OF COPYRIGHTS
United States of America

OFFICIAL SEAL

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

1 TITLE OF THIS WORK ▼
Cisco IOS 11.3

PREVIOUS OR ALTERNATIVE TITLES ▼ Cisco IOS Release 11.3; Cisco IOS Version 11.3; Cisco Internetwork Operating System 11.3; Cisco Internetwork Operating System Release 11.3; Cisco Internetwork Operating System Version 11.3

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼ Number ▼ Issue Date ▼ On Pages ▼

2 a NAME OF AUTHOR ▼
Cisco Systems, Inc.

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☑ Yes ☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ ____ Domiciled in ▶ United States

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☑ No
Pseudonymous? ☐ Yes ☑ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼
New and revised computer code and accompanying documentation

NOTE Under the law, the "author" of a "work made for hire" is generally the employer, not the employee (see instructions). For any part of this work that was "made for hire" check "Yes" in the space provided, give the employer (or other person for whom the work was prepared) as "Author" of that part, and leave the space for dates of birth and death blank.

b NAME OF AUTHOR ▼
See Attached Form TX/CON for Additional Authors

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes ☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ ____ Domiciled in ▶ ____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

c NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes ☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ ____ Domiciled in ▶ ____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

3 a YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED This information must be given in all cases.
1997 ◀ Year

b DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK
Complete this information ONLY if this work has been published.
Month ▶ ____ Day ▶ ____ Year ▶ ____
◀ Nation

4 COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼
Cisco Technology, Inc.
170 West Tasman Drive
San Jose, CA 95134

See instructions before completing this space.

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼
By agreement

DO NOT WRITE HERE OFFICE USE ONLY

APPLICATION RECEIVED
JUN 14 2002

ONE DEPOSIT RECEIVED
JUN 14 2002

TWO DEPOSITS RECEIVED

FUNDS RECEIVED

MORE ON BACK ▶ • Complete all applicable spaces (numbers 5-9) on the reverse side of this page. • See detailed instructions. • Sign the form at line 8.

DO NOT WRITE HERE
Page 1 of 4 pages

EXAMINED BY TMS

CHECKED BY

CORRESPONDENCE
Yes

FORM TX

FOR COPYRIGHT OFFICE USE ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office? **5**

☑ Yes ☐ No If your answer is "Yes," why is another registration being sought? (Check appropriate box.) ▼

a. ☐ This is the first published edition of a work previously registered in unpublished form.

b. ☐ This is the first application submitted by this author as copyright claimant.

c. ☑ This is a changed version of the work, as shown by space 6 on this application.

If your answer is "Yes," give: Previous Registration Number ▶ Pending Year of Registration ▶ 2002

DERIVATIVE WORK OR COMPILATION **a 6**

Preexisting Material Identify any preexisting work or works that this work is based on or incorporates. ▼

Prior works by claimant and preexisting third party computer code

See instructions before completing this space.

Material Added to This Work Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼ **b**

New and revised computer code and accompanying documentation

DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account. **a 7**

Name ▼ Account Number ▼

CORRESPONDENCE Give name and address to which correspondence about this application should be sent. Name/Address/Apt/City/State/ZIP ▼ **b**

Tu T. Tsao, Esq.
Fenwick & West LLP
2 Palo Alto Square
Palo Alto, CA 94306

Area code and daytime telephone number ▶ (650) 858-7696 Fax number ▶ (650) 494-1417

Email ▶ ttsao@fenwick.com

CERTIFICATION* I, the undersigned, hereby certify that I am the **8**

Check only one ▶
- ☐ author
- ☐ other copyright claimant
- ☐ owner of exclusive right(s)
- ☑ authorized agent of Cisco Technology, Inc.

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name and date ▼ If this application gives a date of publication in space 3, do not sign and submit it before that date.

Robert A. Barr, Worldwide Patent Counsel Date ▶

Handwritten signature (X) ▼

X

Certificate will be mailed in window envelope to this address:

Name ▼ Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼ 2 Palo Alto Square

City/State/ZIP ▼ Palo Alto, CA 94306

9

YOU MUST
- Complete all necessary spaces
- Sign your application in space 8

SEND ALL 3 ELEMENTS IN THE SAME PACKAGE
1. Application form
2. Nonrefundable filing fee in check or money order payable to *Register of Copyrights*
3. Deposit material

MAIL TO
Library of Congress
Copyright Office
101 Independence Avenue, S.E.
Washington, D.C. 20559-6000

As of July 1, 1999, the filing fee for Form TX is $30.

*17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than $2,500.

June 1999—200,000
WEB REV: June 1999

☆U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49

CONTINUATION SHEET FOR APPLICATION FORMS

- This Continuation Sheet is used in conjunction with Forms CA, PA, SE, SR, TX, and VA, only. Indicate which basic form you are continuing in the space in the upper right-hand corner.
- If at all possible, try to fit the information called for into the spaces provided on the basic form.
- If you do not have enough space for all the information you need to give on the basic form, use this Continuation Sheet and submit it with the basic form.
- If you submit this Continuation Sheet, clip (do not tape or staple) it to the basic form and fold the two together before submitting them.
- **Space A of this sheet is intended to identify the basic application.**
  Space B is a continuation of Space 2 on the basic application. Space B is not applicable to Short forms.
  Space C (on the reverse side of this sheet) is for the continuation of Spaces 1, 4, or 6 on the basic application or for the continuation of Space 1 on any of the three Short Forms PA, TX, or VA.

FORM TX /CON
UNITED STATES COPYRIGHT OFFICE

TXu 1-036-062

PA	PAU	SE	SEG	SEU	SR	SRU	TX	TXU	VA	VAU

EFFECTIVE DATE OF REGISTRATION

JUN 14 2002
(Month) (Day) (Year)

CONTINUATION SHEET RECEIVED
JUN 14 2002

Page 3 of 4 pages

DO NOT WRITE ABOVE THIS LINE. FOR COPYRIGHT OFFICE USE ONLY

A Identification of Application

IDENTIFICATION OF CONTINUATION SHEET: This sheet is a continuation of the application for copyright registration on the basic form submitted for the following work:

- TITLE: (Give the title as given under the heading "Title of this Work" in Space 1 of the basic form.)
  Cisco IOS 11.3
- NAME(S) AND ADDRESS(ES) OF COPYRIGHT CLAIMANT(S): (Give the name and address of at least one copyright claimant as given in Space 4 of the basic form or Space 2 of any of the Short Forms PA, TX, or VA.)
  Cisco Technology, Inc., 170 West Tasman Drive, San Jose, CA 95134

B Continuation of Space 2

d

NAME OF AUTHOR ▼
(See Space C)

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ _____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

e

NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ _____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

f

NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ _____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

Use the reverse side of this sheet if you need more space for continuation of Spaces 1, 4, or 6 of the basic form or for the continuation of Space 1 on any of the Short Forms PA, TX, or VA.

CONTINUATION OF (Check which): ☐ Space 1 ☐ Space 4 ☐ Space 6 ☑ Space 8b

C
Continuation of other Spaces

Name of Author	Work for Hire	Domicile	Anonymous	Pseudonymous	Nature of Contribution
HCL America, Inc.	Yes	United States	Yes	No	Computer code
HCL Consulting Limited	Yes	India	Yes	No	Computer code
Metaplex, Inc.	Yes	United States	Yes	No	Computer code
Technosoft Corp.	Yes	United States	Yes	No	Computer code
Nano Solutions	Yes	United States	Yes	No	Documentation
Oakhill Publications/ Computer Education Consulting	Yes	United States	Yes	No	Documentation
ABE Staffing Services, Inc.	Yes	United States	Yes	No	Documentation
Lasselle-Ramsay	Yes	United States	Yes	No	Documentation
Kevin Shafer	No	United States	Yes	No	Documentation
Rick Barron	No	United States	Yes	No	Documentation

Certificate will be mailed in window envelope to this address:

Name ▼
Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼
2 Palo Alto Square

City/State/ZIP ▼
Palo Alto, CA 94306

YOU MUST
- Complete all necessary spaces
- Sign your application

SEND ALL 3 ELEMENTS IN THE SAME PACKAGE
1. Application form
2. Nonrefundable fee in check or money order payable to *Register of Copyrights*
3. Deposit Material

MAIL TO
Library of Congress, Copyright Office
101 Independence Avenue, S.E.
Washington, D.C. 20559-6000

D
Fees are effective through June 30, 2002. After that date, check the Copyright Office Website at www.loc.gov/copyright or call (202) 707-3000 for current fee information.

EXHIBIT E

Copyright Office fees are subject to change. For current fees, check the Copyright Office website at *www.copyright.gov*, write the Copyright Office, or call (202) 707-3000.

FORM CA

For Supplementary Registration
UNITED STATES COPYRIGHT OFFICE

REGISTRATION NUMBER

TX	TXU	PA	PAU	VA	VAU	SR	SRU	RE

EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

Month Day Year

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

A

Title of Work ▼
Cisco IOS 12.0

Registration Number of the Basic Registration ▼	Year of Basic Registration ▼
TXu 1-036-064	2002
Name(s) of Author(s) ▼	**Name(s) of Copyright Claimant(s) ▼**
Please see Space D for list of author names	Cisco Technology, Inc.

B

Location and Nature of Incorrect Information in Basic Registration ▼

Line Number 2a Line Heading or Description Name of Author

Incorrect Information as It Appears in Basic Registration ▼

Cisco Systems, Inc.

Corrected Information ▼

Cisco Systems Sales & Services, Inc.

Explanation of Correction ▼

correct name of author

C

Location and Nature of Information in Basic Registration to be Amplified ▼

Line Number 2b and C Line Heading or Description Name of Author

Amplified Information and Explanation of Information ▼

Please add the following to the list of authors:

Name of Author: Cisco Technology, Inc.
Work for Hire: Yes
Domicile: United States
Anonymous: No
Pseudonymous: No
Nature of Contribution: Computer code and documentation

FORM CA RECEIVED — FORM CA

FUNDS RECEIVED DATE

EXAMINED BY

CORRESPONDENCE ☐

REFERENCE TO THIS REGISTRATION ADDED TO BASIC REGISTRATION ☐ YES ☐ NO

FOR COPYRIGHT OFFICE USE ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

D

Continuation of: ☐ Part B *or* ☐ Part C ☑ Part A

Cisco Systems, Inc.
Adecco Employment Services
Avnisoft Corporation
HCL Consulting Limited
HCL America, Inc.
H.L. Yoh Company LLC
Aquas
Metaplex, Inc.
Rapidigm
Wipro Limited
Lasselle-Ramsay
Oakhill Publications / Computer Education Consulting
Rick Barron
On-Call Consultants, Inc.
Judy Melanson

E

Correspondence: Give name and address to which correspondence about this application should be sent.

Tu T. Tsao, Esq.
Fenwick & West LLP
801 California Street
Mountain View, CA 94041

Phone (650) 335-7696 Fax (650) 938-5200 Email ttsao@fenwick.com

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name _____

Account Number _____

F

Certification* I, the undersigned, hereby certify that I am the: (Check only one)

☐ author ☐ owner of exclusive right(s)
☐ other copyright claimant ☑ duly authorized agent of Cisco Technology, Inc.
Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name ▼ Robert A. Barr, Worldwide Patent Counsel Date ▼ 1/8/03

Handwritten signature (X) ▼ Robert Barr

G

Certificate will be mailed in window envelope to this address:

Name ▼ Susanne S. Morales, Paralegal / Fenwick & West LLP
Number/Street/Apt ▼ 801 California Street
City/State/ZIP ▼ Mountain View, CA 94041

YOU MUST
- Complete all necessary spaces
- Sign your application in Space F

SEND ALL ELEMENTS IN THE SAME PACKAGE
1. Application form
2. Nonrefundable filing fee in check or money order payable to *Register of Copyrights*

MAIL TO
Library of Congress
Copyright Office
101 Independence Avenue, S.E.
Washington, D.C. 20559-6000

Fees are subject to change. For current fees, check the Copyright Office website at www.copyright.gov, write the Copyright Office, or call (202) 707-3000.

*17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than $2,500.

CERTIFICATE OF REGISTRATION

FORM TX
a Nondramatic Literary Work
UNITED STATES COPYRIGHT OFFICE

This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

Marybeth Peters
REGISTER OF COPYRIGHTS
United States of America

OFFICIAL SEAL

TXu 1-036-064

EFFECTIVE DATE OF REGISTRATION
JUN 14 2002
Month Day Year

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

1 TITLE OF THIS WORK ▼
Cisco IOS 12.0

PREVIOUS OR ALTERNATIVE TITLES ▼ Cisco IOS Release 12.0; Cisco IOS Version 12.0; Cisco Internetwork Operating System 12.0; Cisco Internetwork Operating System Release 12.0; Cisco Internetwork Operating System Version 12.0

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼ Number ▼ Issue Date ▼ On Pages ▼

2 a NAME OF AUTHOR ▼
Cisco Systems, Inc.

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☑ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ United States

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
If the answer to either of these questions is "Yes," see detailed instructions.
Anonymous? ☐ Yes ☑ No
Pseudonymous? ☐ Yes ☑ No

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼
New and revised computer code and accompanying documentation

NOTE
Under the law, the "author" of a "work made for hire" is generally the employer, not the employee (see instructions). For any part of this work that was "made for hire" check "Yes" in the space provided, give the employer (or other person for whom the work was prepared) as "Author" of that part, and leave the space for dates of birth and death blank.

b NAME OF AUTHOR ▼
See Attached Form TX/CON for Additional Authors

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ _____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
If the answer to either of these questions is "Yes," see detailed instructions.
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

c NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

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☐ No

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Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ _____

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Pseudonymous? ☐ Yes ☐ No

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

3 a YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED
1998 ◀ Year
This information must be given in all cases.

b DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK
Complete this information ONLY if this work has been published.
Month ▶ _____ Day ▶ _____ Year ▶ _____
_____ ◀ Nation

4 COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼
Cisco Technology, Inc.
170 West Tasman Drive
San Jose, CA 95134

See instructions before completing this space.

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼
By agreement

DO NOT WRITE HERE OFFICE USE ONLY

APPLICATION RECEIVED
JUN 14 2002

ONE DEPOSIT RECEIVED
JUN 14 2002

TWO DEPOSITS RECEIVED

FUNDS RECEIVED

MORE ON BACK ▶ • Complete all applicable spaces (numbers 5-9) on the reverse side of this page. • See detailed instructions. • Sign the form at line 8.

DO NOT WRITE HERE
Page 1 of 4 pages

EXAMINED BY Tms' FORM TX

CHECKED BY

☐ CORRESPONDENCE Yes

FOR COPYRIGHT OFFICE USE ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office? **5**

☑ Yes ☐ No If your answer is "Yes," why is another registration being sought? (Check appropriate box.) ▼

a. ☐ This is the first published edition of a work previously registered in unpublished form.

b. ☐ This is the first application submitted by this author as copyright claimant.

c. ☑ This is a changed version of the work, as shown by space 6 on this application.

If your answer is "Yes," give: Previous Registration Number ▶ Pending Year of Registration ▶ 2002

DERIVATIVE WORK OR COMPILATION **a 6**

Preexisting Material Identify any preexisting work or works that this work is based on or incorporates. ▼

Prior works by claimant and preexisting third party computer code

See instructions before completing this space.

Material Added to This Work Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼ **b**

New and revised computer code and accompanying documentation

DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account. **a 7**

Name ▼ Account Number ▼

CORRESPONDENCE Give name and address to which correspondence about this application should be sent. Name/Address/Apt/City/State/ZIP ▼ **b**

Tu T. Tsao, Esq.
Fenwick & West LLP
2 Palo Alto Square
Palo Alto, CA 94306

Area code and daytime telephone number ▶ (650) 858-7696 Fax number ▶ (650) 494-1417

Email ▶ ttsao@fenwick.com

CERTIFICATION* I, the undersigned, hereby certify that I am the **8**

Check only one ▶
- ☐ author
- ☐ other copyright claimant
- ☐ owner of exclusive right(s)
- ☑ authorized agent of Cisco Technology, Inc.

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name and date ▼ If this application gives a date of publication in space 3, do not sign and submit it before that date.

Robert A. Barr, Worldwide Patent Counsel Date ▶

Handwritten signature (X) ▼

X _____

Certificate will be mailed in window envelope to this address:

Name ▼ Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼ 2 Palo Alto Square

City/State/ZIP ▼ Palo Alto, CA 94306

9

YOU MUST
- Complete all necessary spaces
- Sign your application in space 8

SEND ALL 3 ELEMENTS IN THE SAME PACKAGE
1. Application form
2. Nonrefundable filing fee in check or money order payable to *Register of Copyrights*
3. Deposit material

MAIL TO
Library of Congress
Copyright Office
101 Independence Avenue, S.E.
Washington, D.C. 20559-6000

As of July 1, 1999, the filing fee for Form TX is $30.

*17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 408, or in any written statement filed in connection with the application, shall be fined not more than $2,500.

June 1999—200,000
WEB REV: June 1999

☆U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49

CONTINUATION SHEET FOR APPLICATION FORMS

FORM TX /CON
UNITED STATES COPYRIGHT OFFICE

TXu 1-036-064

PA PAU SE SEG SEU SR SRU TX TXU VA VAU

EFFECTIVE DATE OF REGISTRATION

JUN 14 2002
(Month) (Day) (Year)

CONTINUATION SHEET RECEIVED
JUN 14 2002

Page 3 of 4 pages

- This Continuation Sheet is used in conjunction with Forms CA, PA, SE, SR, TX, and VA, only. Indicate which basic form you are continuing in the space in the upper right-hand corner.
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- **Space A of this sheet is intended to identify the basic application.**
  Space B is a continuation of Space 2 on the basic application. Space B is not applicable to Short forms.
  Space C (on the reverse side of this sheet) is for the continuation of Spaces 1, 4, or 6 on the basic application or for the continuation of Space 1 on any of the three Short Forms PA, TX, or VA.

DO NOT WRITE ABOVE THIS LINE. FOR COPYRIGHT OFFICE USE ONLY

A Identification of Application

IDENTIFICATION OF CONTINUATION SHEET: This sheet is a continuation of the application for copyright registration on the basic form submitted for the following work:

- TITLE: (Give the title as given under the heading "Title of this Work" in Space 1 of the basic form.)
  Cisco IOS 12.0
- NAME(S) AND ADDRESS(ES) OF COPYRIGHT CLAIMANT(S): (Give the name and address of at least one copyright claimant as given in Space 4 of the basic form or Space 2 of any of the Short Forms PA, TX, or VA.)
  Cisco Technology, Inc., 170 West Tasman Drive, San Jose, CA 95134

B Continuation of Space 2

d

NAME OF AUTHOR ▼
(See Space C)

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ _____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

e

NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ _____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

f

NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ _____
Domiciled in ▶ _____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

Use the reverse side of this sheet if you need more space for continuation of Spaces 1, 4, or 6 of the basic form or for the

CONTINUATION OF (Check which): ☐ Space 1 ☐ Space 4 ☐ Space 6 ☑ Space 2b

C

Continuation of other Spaces

Name of Author	Work for Hire	Domicile	Anonymous	Pseudonymous	Nature of Contribution
Adecco Employment Services	Yes	United States	Yes	No	Computer code
Avnisoft Corporation	Yes	United States	Yes	No	Computer code
HCL Consulting Limited	Yes	United States	Yes	No	Computer code
HCL America, Inc.	Yes	India	Yes	No	Computer code
H.L. Yoh Company LLC	Yes	United States	Yes	No	Computer code
Aquas	Yes	United States	Yes	No	Computer code
Metaplex, Inc.	Yes	United States	Yes	No	Computer code
Rapidigm	Yes	United States	Yes	No	Computer code
Wipro Limited	Yes	India	Yes	No	Computer code
Lasselle-Ramsay	Yes	United States	Yes	No	Documentation
Oakhill Publications/ Computer Education Consulting	Yes	United States	Yes	No	Documentation
Rick Barron	No	United States	Yes	No	Documentation
On-Call Consultants, Inc.	Yes	United States	Yes	No	Documentation
Judy Melanson	No	United States	Yes	No	Documentation

Certificate will be mailed in window envelope to this address:

Name ▼
Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼
2 Palo Alto Square

City/State/ZIP ▼
Palo Alto, CA 94306

YOU MUST
- Complete all necessary spaces
- Sign your application

SEND ALL 3 ELEMENTS IN THE SAME PACKAGE
1. Application form
2. Nonrefundable fee in check or money order payable to *Register of Copyrights*
3. Deposit Material

MAIL TO
Library of Congress, Copyright Office
101 Independence Avenue, S.E.
Washington, D.C. 20559-6000

D

Fees are effective through June 30, 2003. After that date, check the Copyright office Website at www.loc.gov/copyright or call (202) 707-3000 for current fee information.

☆U.S.GOVERNMENT PRINTING OFFICE: 2000-461-113/78

EXHIBIT F

Copyright Office fees are subject to change. For current fees, check the Copyright Office website at *www.copyright.gov*, write the Copyright Office, or call (202) 707-3000.

FORM CA
For Supplementary Registration
UNITED STATES COPYRIGHT OFFICE

REGISTRATION NUMBER

TX	TXU	PA	PAU	VA	VAU	SR	SRU	RE

EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

Month Day Year

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

A

Title of Work ▼
Cisco IOS 12.1

Registration Number of the Basic Registration ▼	Year of Basic Registration ▼
TXu 1-036-066	2002
Name(s) of Author(s) ▼	**Name(s) of Copyright Claimant(s) ▼**
Please see Space D for list of author names	Cisco Technology, Inc.

B

Location and Nature of Incorrect Information in Basic Registration ▼

Line Number 2a Line Heading or Description Name of Author

Incorrect Information as It Appears in Basic Registration ▼

Cisco Systems, Inc.

Corrected Information ▼

Cisco Systems Sales & Services, Inc.

Explanation of Correction ▼

correct name of author

C

Location and Nature of Information in Basic Registration to be Amplified ▼

Line Number 2b and C Line Heading or Description Name of Author

Amplified Information and Explanation of Information ▼

Please add the following to the list of authors:

Name of Author: Cisco Technology, Inc.
Work for Hire: Yes
Domicile: United States
Anonymous: No
Pseudonymous: No
Nature of Contribution: Computer code and documentation

MORE ON BACK ▶ • Complete all applicable spaces (D-G) on the reverse side of this page. • See detailed instructions. • Sign the form at Space F.

DO NOT WRITE HERE

FORM CA

FORM CA RECEIVED

FUNDS RECEIVED DATE

EXAMINED BY

CORRESPONDENCE ☐

REFERENCE TO THIS REGISTRATION ADDED TO BASIC REGISTRATION ☐ YES ☐ NO

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DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: ☐ Part B or ☐ Part C ☑ Part A

D

Cisco Systems, Inc.
ABE Staffing Services, Inc.
Adecco Employment Services
A.S.K. Office Personnel Solutions
Computer People
Cotelligent
Devsoft Corporation
HCL America, Inc.
HCL Consulting Limited
IT & E Corporation
Ma Foi Management Consultants Limited
Maprik Holdings Pty Ltd
Metaplex, Inc.
Pipelink
Rapidigm
Softsol Resources, Inc.
Wipro Limited
Lasselle-Ramsay
Oakhill Publications / Computer Education Consulting
Essential Solutions
Rick Barron

E

Correspondence: Give name and address to which correspondence about this application should be sent.

Tu T. Tsao, Esq.
Fenwick & West LLP
801 California Street
Mountain View, CA 94041

Phone (650) 335-7696 Fax (650) 938-5200 Email ttsao@fenwick.com

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

F

Certification* I, the undersigned, hereby certify that I am the: (Check only one)

☐ author ☐ owner of exclusive right(s)
☐ other copyright claimant ☑ duly authorized agent of Cisco Technology, Inc.
Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name ▼ Robert A. Barr, Worldwide Patent Counsel Date ▼ 1-8-03

Handwritten signature (X) ▼ Robert Barr

G

Certificate will be mailed in window envelope to this address:

Name ▼
Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼
801 California Street

City/State/ZIP ▼
Mountain View, CA 94041

YOU MUST
• Complete all necessary spaces
• Sign your application in Space F

SEND ALL 3 ELEMENTS IN THE SAME PACKAGE
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Copyright Office
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*17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than $2,500.

CERTIFICATE OF REGISTRATION

FORM TX
For a Nondramatic Literary Work
UNITED STATES COPYRIGHT OFFICE

TXu 1-036-066

EFFECTIVE DATE OF REGISTRATION
JUN 14 2002
Month Day Year

This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

Marybeth Peters
REGISTER OF COPYRIGHTS
United States of America

OFFICIAL SEAL

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

1 TITLE OF THIS WORK ▼
Cisco IOS 12.1

PREVIOUS OR ALTERNATIVE TITLES ▼ Cisco IOS Release 12.1; Cisco IOS Version 12.1; Cisco Internetwork Operating System 12.1; Cisco Internetwork Operating System Release 12.1; Cisco Internetwork Operating System Version 12.1

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼ Number ▼ Issue Date ▼ On Pages ▼

2 a NAME OF AUTHOR ▼
Cisco Systems, Inc.

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☑ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ ____
Domiciled in ▶ United States

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
If the answer to either of these questions is "Yes," see detailed instructions.
Anonymous? ☐ Yes ☑ No
Pseudonymous? ☐ Yes ☑ No

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼
New and revised computer code and accompanying documentation

NOTE
Under the law, the "author" of a "work made for hire" is generally the employer, not the employee (see instructions). For any part of this work that was "made for hire" check "Yes" in the space provided, give the employer (or other person for whom the work was prepared) as "Author" of that part, and leave the space for dates of birth and death blank.

b NAME OF AUTHOR ▼
See Attached Form TX/CON for Additional Authors

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ ____
Domiciled in ▶ ____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
If the answer to either of these questions is "Yes," see detailed instructions.
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

c NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?
☐ Yes
☐ No

AUTHOR'S NATIONALITY OR DOMICILE
Name of Country
OR { Citizen of ▶ ____
Domiciled in ▶ ____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
If the answer to either of these questions is "Yes," see detailed instructions.
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

3 a YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED
2000 ◀ Year
This information must be given in all cases.

b DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK
Complete this information ONLY if this work has been published.
Month ▶ ____ Day ▶ ____ Year ▶ ____
◀ Nation

4 COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼
Cisco Technology, Inc.
170 West Tasman Drive
San Jose, CA 95134

See instructions before completing this space.

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼
By agreement

DO NOT WRITE HERE OFFICE USE ONLY

APPLICATION RECEIVED
JUN. 14. 2002

ONE DEPOSIT RECEIVED
JUN 14 2002

TWO DEPOSITS RECEIVED

FUNDS RECEIVED

MORE ON BACK ▶ • Complete all applicable spaces (numbers 5-9) on the reverse side of this page. • See detailed instructions. • Sign the form at line 8.

DO NOT WRITE HERE
Page 1 of 4 pages

EXAMINED BY TMS

CHECKED BY

CORRESPONDENCE ☐ Yes

FORM TX

FOR COPYRIGHT OFFICE USE ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office? **5**

☑ Yes ☐ No If your answer is "Yes," why is another registration being sought? (Check appropriate box.) ▼

a. ☐ This is the first published edition of a work previously registered in unpublished form.

b. ☐ This is the first application submitted by this author as copyright claimant.

c. ☑ This is a changed version of the work, as shown by space 6 on this application.

If your answer is "Yes," give: Previous Registration Number ▶ Pending Year of Registration ▶ 2002

DERIVATIVE WORK OR COMPILATION **a** **6**

Preexisting Material Identify any preexisting work or works that this work is based on or incorporates. ▼

Prior works by claimant and preexisting third party computer code

See instructions before completing this space.

Material Added to This Work Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼ **b**

New and revised computer code and accompanying documentation

DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account. **a** **7**

Name ▼ Account Number ▼

CORRESPONDENCE Give name and address to which correspondence about this application should be sent. Name/Address/Apt/City/State/ZIP ▼ **b**

Tu T. Tsao, Esq.
Fenwick & West LLP
2 Palo Alto Square
Palo Alto, CA 94306

Area code and daytime telephone number ▶ (650) 858-7696 Fax number ▶ (650) 494-1417

Email ▶ ttsao@fenwick.com

CERTIFICATION* I, the undersigned, hereby certify that I am the **8**

Check only one ▶
- ☐ author
- ☐ other copyright claimant
- ☐ owner of exclusive right(s)
- ☑ authorized agent of Cisco Technology, Inc.

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name and date ▼ If this application gives a date of publication in space 3, do not sign and submit it before that date.

Robert A. Barr, Worldwide Patent Counsel Date ▶

Handwritten signature (X) ▼

X

Certificate will be mailed in window envelope to this address: **9**

Name ▼
Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼
2 Palo Alto Square

City/State/ZIP ▼
Palo Alto, CA 94306

YOU MUST:
- Complete all necessary spaces
- Sign your application in space 8

SEND ALL 3 ELEMENTS IN THE SAME PACKAGE
1. Application form
2. Nonrefundable filing fee in check or money order payable to *Register of Copyrights*
3. Deposit material

MAIL TO:
Library of Congress
Copyright Office
101 Independence Avenue, S.E.
Washington, D.C. 20559-6000

As of July 1, 1999, the filing fee for Form TX is $30.

*17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than $2,500.

June 1999—200,000
WEB REV: June 1999

☆U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49

CONTINUATION SHEET FOR APPLICATION FORMS

- This Continuation Sheet is used in conjunction with Forms CA, PA, SE, SR, TX, and VA, only. Indicate which basic form you are continuing in the space in the upper right-hand corner.
- If at all possible, try to fit the information called for into the spaces provided on the basic form.
- If you do not have enough space for all the information you need to give on the basic form, use this Continuation Sheet and submit it with the basic form.
- If you submit this Continuation Sheet, clip (do not tape or staple) it to the basic form and fold the two together before submitting them.
- **Space A of this sheet is intended to identify the basic application. Space B is a continuation of Space 2 on the basic application. Space B is not applicable to Short forms. Space C (on the reverse side of this sheet) is for the continuation of Spaces 1, 4, or 6 on the basic application or for the continuation of Space 1 on any of the three Short Forms PA, TX, or VA.**

FORM TX /CON
UNITED STATES COPYRIGHT OFFICE

TXu 1-036-066

PA PAU SE SEG SEU SR SRU TX TXU VA VAU

EFFECTIVE DATE OF REGISTRATION

JUN 14 2002
(Month) (Day) (Year)

CONTINUATION SHEET RECEIVED
JUN 14 2002

Page 3 of 4 pages

DO NOT WRITE ABOVE THIS LINE. FOR COPYRIGHT OFFICE USE ONLY

A Identification of Application

IDENTIFICATION OF CONTINUATION SHEET: This sheet is a continuation of the application for copyright registration on the basic form submitted for the following work:

- TITLE: (Give the title as given under the heading "Title of this Work" in Space 1 of the basic form.)

Cisco IOS 12.1

- NAME(S) AND ADDRESS(ES) OF COPYRIGHT CLAIMANT(S): (Give the name and address of at least one copyright claimant as given in Space 4 of the basic form or Space 2 of any of the Short Forms PA, TX, or VA.)

Cisco Technology, Inc., 170 West Tasman Drive, San Jose, CA 95134

B Continuation of Space 2

d

NAME OF AUTHOR ▼ (See Space C)

DATES OF BIRTH AND DEATH
Year Born▼ Year Died▼

Was this contribution to the work a "work made for hire"? ☐ Yes ☐ No

AUTHOR'S NATIONALITY OR DOMICILE Name of Country
OR { Citizen of ▶ ____ / Domiciled in ▶ ____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

e

NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born▼ Year Died▼

Was this contribution to the work a "work made for hire"? ☐ Yes ☐ No

AUTHOR'S NATIONALITY OR DOMICILE Name of Country
OR { Citizen of ▶ ____ / Domiciled in ▶ ____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

f

NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born▼ Year Died▼

Was this contribution to the work a "work made for hire"? ☐ Yes ☐ No

AUTHOR'S NATIONALITY OR DOMICILE Name of Country
OR { Citizen of ▶ ____ / Domiciled in ▶ ____

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of the material created by the author in which copyright is claimed. ▼

Use the reverse side of this sheet if you need more space for continuation of Spaces 1, 4, or 6 of the basic form or for the continuation of Space 1 on any of the Short Forms PA, TX, or VA.

CONTINUATION OF (Check which): ☐ Space 1 ☐ Space 4 ☐ Space 6 ☑ Space 2b

C Continuation of other Spaces

Name of Author	Work for Hire	Domicile	Anonymous	Pseudonymous	Nature of Contribution
ABE Staffing Services, Inc.	Yes	United States	Yes	No	Computer code
Adecco Employment Services	Yes	United States	Yes	No	Computer code
A.S.K. Office Personnel Solutions	Yes	Australia	Yes	No	Computer code
Computer People	Yes	United States	Yes	No	Computer code
Cotelligent	Yes	United States	Yes	No	Computer code
Devsoft Corporation	Yes	United States	Yes	No	Computer code
HCL America, Inc.	Yes	United States	Yes	No	Computer code
HCL Consulting Limited	Yes	India	Yes	No	Computer code
IT & E Corporation		United States	Yes	No	Computer code
Ma Foi Management Consultants Limited	Yes	India	Yes	No	Computer code
Maprik Holdings Pty Ltd	Yes	Australia	Yes	No	Computer code
Metaplex, Inc.	Yes	United States	Yes	No	Computer code
Pipelink	Yes	United States	Yes	No	Computer code
Rapidigm		United States	Yes	No	Computer code
Softsol Resources, Inc.	Yes	India	Yes	No	Computer code
Wipro Limited	Yes	United States	Yes	No	Documentation
Lasselle-Ramsay Oakhill Publications/ Computer Education Consulting	Yes	United States	Yes	No	Documentation
Essential Solutions	Yes	United States	Yes	No	Documentation
Rick Barron	No	United States	Yes	No	Documentation

Certificate will be mailed in window envelope to this address:

Name ▼
Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼
2 Palo Alto Square

City/State/ZIP ▼
Palo Alto, CA 94306

YOU MUST
- Complete all necessary spaces
- Sign your application

SEND ALL 3 ELEMENTS IN THE SAME PACKAGE
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3. Deposit Material

MAIL TO
Library of Congress, Copyright Office
101 Independence Avenue, S.E.
Washington, D.C. 20559-6000

D

Fees are effective through June 30, 2002. After that date, check the Copyright office Website at www.loc.gov/copyright or call (202) 707-3000 for current fee information.

☆U.S. GOVERNMENT PRINTING OFFICE: 2000-461-113/78

EXHIBIT G

Copyright Office fees are subject to change. For current fees, check the Copyright Office website at *www.copyright.gov*, write the Copyright Office, or call (202) 707-3000.

FORM CA

For Supplementary Registration
UNITED STATES COPYRIGHT OFFICE

REGISTRATION NUMBER

TX	TXU	PA	PAU	VA	VAU	SR	SRU	RE

EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

Month Day Year

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

A

Title of Work ▼
Cisco IOS 12.2

Registration Number of the Basic Registration ▼
TXu 1-036-065

Year of Basic Registration ▼
2002

Name(s) of Author(s) ▼
Please see Space D for list of name of authors

Name(s) of Copyright Claimant(s) ▼
Cisco Technology, Inc.

B

Location and Nature of Incorrect Information in Basic Registration ▼

Line Number 2a Line Heading or Description Name of Author

Incorrect Information as It Appears in Basic Registration ▼
Cisco Systems, Inc.

Corrected Information ▼
Cisco Systems Sales & Services, Inc.

Explanation of Correction ▼
correct name of author

C

Location and Nature of Information in Basic Registration to be Amplified ▼

Line Number 2b and C Line Heading or Description Name of Author

Amplified Information and Explanation of Information ▼

Please add the following to the list of author names:

Name of Author: Cisco Technology, Inc.
Work for Hire: Yes
Domicile: United States
Anonymous: No
Pseudonymous: No
Nature of Contribution: Computer code and documentation

FORM CA REVISED

FUNDS RECEIVED DATE

EXAMINED BY

CORRESPONDENCE ☐

REFERENCE TO THIS REGISTRATION ADDED TO BASIC REGISTRATION ☐ YES ☐ NO

FOR COPYRIGHT OFFICE USE ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: ☐ Part B *or* ☐ Part C ☑ Part A

D

Cisco Systems, Inc.
ABE Staffing Services, Inc.
Adecco Employment Services
Acionyx, Incorporated
Greenwood Group, dba Manpower Technical Services
HCL America, Inc.
HCL Consulting Limited
H.L. Yoh Company LLC
Hughes Software Systems USA
InfoSys Technologies Limited
Insight Solutions, Inc.
IT & E Corporation
Ma Foi Management Consultants Limited
Metalogic, S.A.R.L.
Metaplex, Inc.
Rapidigm
Savvy System Consultants
Ultimate Technology, Inc.
Wipro Limited
Lasselle-Ramsay
Oakhill Publications / Computer Education Consulting
Rick Barron

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Tu T. Tsao, Esq.
Fenwick & West LLP
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Mountain View, CA 94041

Phone (650) 335-7696 Fax (650) 938-5200 Email ttsao@fenwick.com

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Name

Account Number

F

Certification* I, the undersigned, hereby certify that I am the: (Check only one)

☐ author ☐ owner of exclusive right(s)
☐ other copyright claimant ☑ duly authorized agent of Cisco Technology, Inc.
Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name ▼ Robert A. Barr, Worldwide Patent Counsel Date ▼ 1-8-03

Handwritten signature (X) ▼

G

Certificate will be mailed in window envelope to this address:

Name ▼
Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼
801 California Street

City/State/ZIP ▼
Mountain View, CA 94041

YOU MUST:
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• Sign your application in Space F

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Copyright Office
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Washington, D.C. 20559-6000

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UNITED STATES COPYRIGHT OFFICE

This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

OFFICIAL SEAL

Marybeth Peters
REGISTER OF COPYRIGHTS
United States of America

RE
TXu 1-036-065

EFFECTIVE DATE OF REGISTRATION
JUN 14 2002
Month Day Year

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

1 TITLE OF THIS WORK ▼
Cisco IOS 12.2

PREVIOUS OR ALTERNATIVE TITLES ▼ Cisco IOS Release 12.2; Cisco IOS Version 12.2; Cisco Internetwork Operating System 12.2; Cisco Internetwork Operating System Release 12.2; Cisco Internetwork Operating System Version 12.2

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼ Number ▼ Issue Date ▼ On Pages ▼

2 a
NAME OF AUTHOR ▼
Cisco Systems, Inc.
DATES OF BIRTH AND DEATH Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"? ☑ Yes ☐ No
AUTHOR'S NATIONALITY OR DOMICILE Name of Country
OR { Citizen of ▶ ____ Domiciled in ▶ United States
WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☑ No
Pseudonymous? ☐ Yes ☑ No
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼
New and revised computer code and accompanying documentation

NOTE Under the law, the "author" of a "work made for hire" is generally the employer, not the employee (see instructions). For any part of this work that was "made for hire" check "Yes" in the space provided, give the employer (or other person for whom the work was prepared) as "Author" of that part, and leave the space for dates of birth and death blank.

b
NAME OF AUTHOR ▼
See Attached Form TX/CON for Additional Authors
DATES OF BIRTH AND DEATH Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"? ☐ Yes ☐ No
AUTHOR'S NATIONALITY OR DOMICILE Name of Country
OR { Citizen of ▶ ____ Domiciled in ▶ ____
WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK
Anonymous? ☐ Yes ☐ No
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c
NAME OF AUTHOR ▼
DATES OF BIRTH AND DEATH Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"? ☐ Yes ☐ No
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NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

3 a YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED This information must be given in all cases.
2001 ◀ Year

b DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK
Complete this information ONLY if this work has been published.
Month ▶ ____ Day ▶ ____ Year ▶ ____ ◀ Nation

4 COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼
Cisco Technology, Inc.
170 West Tasman Drive
San Jose, CA 95134

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Page 1 of 4 pages

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CORRESPONDENCE
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☑ Yes ☐ No If your answer is "Yes," why is another registration being sought? (Check appropriate box.) ▼

a. ☐ This is the first published edition of a work previously registered in unpublished form.

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Prior works by claimant and preexisting third party computer code

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Name ▼ Account Number ▼

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Tu T. Tsao, Esq.
Fenwick & West LLP
2 Palo Alto Square
Palo Alto, CA 94306

Area code and daytime telephone number ▶ (650) 858-7696 Fax number ▶ (650) 494-1417

Email ▶ ttsao@fenwick.com

CERTIFICATION* I, the undersigned, hereby certify that I am the **8**

Check only one ▶
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of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name and date ▼ If this application gives a date of publication in space 3, do not sign and submit it before that date.

Robert A. Barr, Worldwide Patent Counsel Date ▶

Handwritten signature (X) ▼

X

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Susanne S. Morales, Paralegal / Fenwick & West LLP

Number/Street/Apt ▼
2 Palo Alto Square

City/State/ZIP ▼
Palo Alto, CA 94306

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June 1999—200,000
WEB REV: June 1999

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- This Continuation Sheet is used in conjunction with Forms CA, PA, SE, SR, TX, and VA, only. Indicate which basic form you are continuing in the space in the upper right-hand corner.
- If at all possible, try to fit the information called for into the spaces provided on the basic form.
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- **Space A of this sheet is intended to identify the basic application.**
  Space B is a continuation of Space 2 on the basic application. Space B is not applicable to Short forms.
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TXu 1-036-065

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Page 3 of 4 pages

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IDENTIFICATION OF CONTINUATION SHEET: This sheet is a continuation of the application for copyright registration on the basic form submitted for the following work:

- TITLE: (Give the title as given under the heading "Title of this Work" in Space 1 of the basic form.)
  Cisco IOS 12.2
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B Continuation of Space 2

d

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(See Space C)

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☐ No

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OR { Citizen of ▶ _____
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NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH
Year Born ▼ Year Died ▼

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☐ Yes
☐ No

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DATES OF BIRTH AND DEATH
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☐ No

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Name of Country
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Anonymous? ☐ Yes ☐ No
Pseudonymous? ☐ Yes ☐ No
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C Continuation of other Spaces

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Adecco Employment Services	Yes	United States	Yes	No	Computer code and documentation
Acionyx, Incorporated	Yes	United States	Yes	No	Computer code
Greenwood Group, dba Manpower Technical Services	Yes	United States	Yes	No	Computer code and documentation
HCL America, Inc.	Yes	United States	Yes	No	Computer code
HCL Consulting Limited	Yes	United States	Yes	No	Computer code
H.L. Yoh Company LLC	Yes	United States	Yes	No	Computer code
Hughes Software Systems USA	Yes	United States	Yes	No	Computer code
InfoSys Technologies Limited	Yes	United States	Yes	No	Computer code
Insight Solutions, Inc.	Yes	United States	Yes	No	Computer code
IT & E Corporation	Yes	United States	Yes	No	Computer code
Ma Foi Management Consultants Limited	Yes	United States	Yes	No	Computer code
Metalogic, S.A.R.L.	Yes	United States	Yes	No	Computer code
Metaplex, Inc.	Yes	United States	Yes	No	Computer code
Rapidign:	Yes	United States	Yes	No	Computer code
Savvy System Consultants	Yes	United States	Yes	No	Computer code
Ultimate Technology, Inc.	Yes	United States	Yes	No	Computer code
Wipro Limited	Yes	United States	Yes	No	Computer code
Lasselle-Ramsay	Yes	United States	Yes	No	Documentation
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Rick Barron	No	United States	Yes	No	Documentation

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November 1998–30,000
WEB REV: June 1999

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Cisco/Huawei

Exhibit H:

Manual Comparison

Huawei "ip address" Command (1 of 2)

* * * *

1.1.1 ip address

To set a primary or secondary IP address for an interface, use the **ip address** command. To remove an IP address or disable IP processing, use the **no** form of this command.

ip address *ip-address mask* [**secondary**]

no ip address [*ip-address*]

Syntax Description

ip-address IP address.

net-mask mask for the associated IP subnet. It is all in decimal format divided by dots. If there is no *ip-address* in the command **no ip address**, delete all the ip-address of the interface.

secondary specifies that the configured address is a secondary IP address. If this keyword is omitted, the configured address is the primary IP address.

Default

No IP address is defined for the interface

Huawei Command Reference, Version 1.5, Volume 1, Module 04, pp. 1-1 to 1-2

http://datacomm.huawei.com/english/index.html

[Select "Document Center" link; then select "VRP Command and Configuration Manual" link; then select "Command ReferenceV1.5"; then select "Command Reference(V1.5)-Volume 1" link.]

Cisco "ip address" Command (1 of 2)

ip address

To set a primary or secondary IP address for an interface, use the **ip address** interface configuration command. To remove an IP address or disable IP processing, use the **no** form of this command.

ip address *ip-address mask* [**secondary**]
no ip address *ip-address mask* [**secondary**]

Syntax Description

ip-address	IP address.
mask	Mask for the associated IP subnet.
secondary	(Optional) Specifies that the configured address is a secondary IP address. If this keyword is omitted, the configured address is the primary IP address.

Default

No IP address is defined for the interface.

Cisco Network Protocols Command Reference, Part 1, Version 11.2, IP Commands, pp. V-57 to V-58

http://www.cisco.com/en/US/products/sw/iosswrel/ps1824/products_command_reference_chapter09186a0080080d98.html

[Select "ip address" link or select PDF file for entire document and go to cited pages]

Huawei "ip address" Command (2 of 2)

* * * *

Command Mode

Interface configuration mode

Usage Guideline

An interface can have one primary IP address and multiple secondary IP addresses. Packets generated by the software always use the primary IP address. Therefore, all routers and access servers on a segment should share the same primary network number.

Hosts can determine subnet masks using the Internet Control Message Protocol (ICMP) Mask Request message. Routers respond to this request with an ICMP Mask Reply message.

You can disable IP processing on a particular interface by removing its IP address with the no ip address command. If the software detects another host using one of its IP addresses, it will print an error message on the console.

The optional keyword secondary allows you to specify an unlimited number of secondary addresses. Secondary addresses are treated like primary addresses, except the system never generates datagrams other than routing updates with secondary source addresses. IP broadcasts and ARP requests are handled properly, as are interface routes in the IP routing table.

Huawei Command Reference, Version 1.5, Volume 1, Module 04, pp. 1-1 to 1-2

http://datacomm.huawei.com/english/index.html

[Select "Document Center" link; then select "VRP Command and Configuration Manual" link; then select "Command ReferenceV1.5"; then select "Command Reference(V1.5)-Volume 1" link.]

Cisco "ip address" Command (2 of 2)

* * * *

Command Mode

Interface configuration

Usage Guidelines

This command first appeared in Cisco IOS Release 10.0.

An interface can have one primary IP address and multiple secondary IP addresses. Packets generated by the Cisco IOS software always use the primary IP address. Therefore, all routers and access servers on a segment should share the same primary network number.

Hosts can determine subnet masks using the Internet Control Message Protocol (ICMP) Mask Request message. Routers respond to this request with an ICMP Mask Reply message.

You can disable IP processing on a particular interface by removing its IP address with the **no ip address** command. If the software detects another host using one of its IP addresses, it will print an error message on the console.

The optional keyword **secondary** allows you to specify an unlimited number of secondary addresses. Secondary addresses are treated like primary addresses, except the system never generates datagrams other than routing updates with secondary source addresses. IP broadcasts and ARP requests are handled properly, as are interface routes in the IP routing table.

Secondary IP addresses can be used in a variety of situations. The following are the most common applications:

- There may not be enough host addresses for a particular network segment. For example, your subnetting allows up to 254 hosts per logical subnet, but on one physical subnet you need to have 300 host addresses. Using secondary IP addresses on the routers or access servers allows you to have two logical subnets using one physical subnet.
- Many older networks were built using Level 2 bridges. The judicious use of secondary addresses can aid in the transition to a subnetted, router-based network. Routers on an older, bridged segment can be easily made aware that there are many subnets on that segment.

Cisco Network Protocols Command Reference, Part 1, Version 11.2, IP Commands, pp. V-57 to V-58

http://www.cisco.com/en/US/products/sw/iosswrel/ps1824/products_command_reference_chapter09186a0080080d98.html

[Select "ip address" link or select PDF file for entire document and go to cited pages]

Huawei "ip unnumbered" Command (1 of 2)

* * * *

1.1.4 ip unnumbered

To enable IP processing on a serial interface without assigning an explicit IP address to the interface, use the **ip unnumbered** command. To disable the IP processing on the interface, use the **no** form of this command.

ip unnumbered *interface-type interface-number*

no ip unnumbered

Syntax Description

interface-type type of another interface on which the router has an assigned IP address.

interface-number number of another interface on which the router has an assigned IP address.

Default

Disabled

Command Mode

Interface configuration mode

Huawei Command Reference, Version 1.5, Volume 1, Module 04, pp. 1-3 to 1-4

http://datacomm.huawei.com/english/index.html

[Select "Document Center" link; then select "VRP Command and Configuration Manual" link; then select "Command ReferenceV1.5"; then select "Command Reference(V1.5)-Volume 1" link.]

Cisco "ip unnumbered" Command (1 of 2)

ip unnumbered

To enable IP processing on a serial interface without assigning an explicit IP address to the interface, use the **ip unnumbered** interface configuration command. To disable the IP processing on the interface, use the **no** form of this command.

ip unnumbered *type number*
no ip unnumbered *type number*

Syntax Description

type number	Type and number of another interface on which the router has an assigned IP address. It cannot be another unnumbered interface.

Default

Disabled

Command Mode

Interface configuration

Cisco Network Protocols Command Reference, Part 1, Version 11.2, IP Commands, pp. V-147 to V-148

http://www.cisco.com/en/US/products/sw/iosswrel/ps1824/products_command_reference_chapter09186a0080080d98.html

[Select "ip unnumbered" link, or select PDF icon for entire document and go to cited pages]

Huawei "ip unnumbered" Command (2 of 2)

* * * *

Usage Guideline

Whenever the unnumbered interface generates a packet (for example, for a routing update), it uses the address of the specified interface as the source address of the IP packet. It also uses the address of the specified interface in determining which routing processes are sending updates over the unnumbered interface. Restrictions include the following:

1) Serial interfaces using HDLC, PPP, Balanced (LAPB), and Frame Relay encapsulations, as well as Serial Line Internet Protocol (SLIP) and tunnel interfaces can be unnumbered. It is not possible to use this interface configuration command with X.25 or Switched Multimegabit Data Service (SMDS) interfaces.
2) You cannot use the **ping** command to determine whether the interface is up, because the interface has no address. Simple Network Management Protocol (SNMP) can be used to remotely monitor interface status.
3) You cannot netboot a runnable image over an unnumbered serial interface.
4) You cannot support IP security options on an unnumbered interface.

The interface you specify by the type and number arguments must be enabled (listed as "up" in the show interfaces command display).

The *interface-type interface-number* cannot be another unnumbered interface.

Example

! Allow IP unnumbered from Ethernet 0 encapsulated with PPP.

Quidway(config-if-Serial0)# ip unnumbered ethernet 0

Related Command

ip proxy-arp

Huawei Command Reference, Version 1.5, Volume 1, Module 04, pp. 1-3 to 1-4

http://datacomm.huawei.com/english/index.html

[Select "Document Center" link; then select "VRP Command and Configuration Manual" link; then select "Command ReferenceV1.5"; then select "Command Reference(V1.5)-Volume 1" link.]

Cisco "ip unnumbered" Command (2 of 2)

* * * *

Usage Guidelines

This command first appeared in Cisco IOS Release 10.0.

Whenever the unnumbered interface generates a packet (for example, for a routing update), it uses the address of the specified interface as the source address of the IP packet. It also uses the address of the specified interface in determining which routing processes are sending updates over the unnumbered interface. Restrictions include the following:

- Serial interfaces using HDLC, PPP, Link Access Procedure, Balanced (LAPB), and Frame Relay encapsulations, as well as Serial Line Internet Protocol (SLIP) and tunnel interfaces can be unnumbered. It is not possible to use this interface configuration command with X.25 or Switched Multimegabit Data Service (SMDS) interfaces.
- You cannot use the **ping** EXEC command to determine whether the interface is up, because the interface has no address. Simple Network Management Protocol (SNMP) can be used to remotely monitor interface status.
- You cannot netboot a runnable image over an unnumbered serial interface.
- You cannot support IP security options on an unnumbered interface.

The interface you specify by the *type* and *number* arguments must be enabled (listed as "up" in the **show interfaces** command display).

If you are configuring IS-IS across a serial line, you should configure the serial interfaces as unnumbered. This allows you to conform with RFC 1195, which states that IP addresses are not required on each interface.

Cisco Network Protocols Command Reference, Part 1, Version 11.2, IP Commands, pp. V-147 to V-148

http://www.cisco.com/en/US/products/sw/iosswrel/ps1824/products_command_reference_chapter09186a0080080d98.html

[Select "ip unnumbered" link, or select PDF icon for entire document and go to cited pages]

Huawei "ip tcp header-compression" Command (1 of 2)

* * * *

2.7 ip tcp header-compression

To enable TCP header compression, use the **ip tcp header-compression** command. To disable compression, use the **no** form of this command.

ip tcp header-compression

no ip tcp header-compression

Default

Disabled

Command Mode

Interface configuration mode

Huawei Command Reference, Version 1.5, Volume 1, Module 04, pp. 2-4 to 2-5

http://datacomm.huawei.com/english/index.html

[Select "Document Center" link; then select "VRP Command and Configuration Manual" link; then select "Command ReferenceV1.5"; then select "Command Reference(V1.5)-Volume 1" link.]

Cisco "ip tcp header-compression" Command (1 of 2)

ip tcp header-compression

To enable TCP header compression, use the **ip tcp header-compression** interface configuration command. To disable compression, use the **no** form of this command.

ip tcp header-compression [**passive**]
no ip tcp header-compression [**passive**]

Syntax Description

passive	(Optional) Compresses outgoing TCP packets only if incoming TCP packets on the same interface are compressed. If you do not specify the **passive** keyword, the Cisco IOS software compresses all traffic.

Default
Disabled

Command Mode
Interface configuration

Cisco Network Protocols Command Reference, Part 1, Version 11.2, IP Commands, pp. V-142

http://www.cisco.com/en/US/products/sw/iosswrel/ps1824/products_command_reference_chapter09186a0080080d98.html

[Select "ip tcp header-compression" link, or select PDF file for entire document and go to cited page]

Huawei "ip tcp header-compression" Command (2 of 2)

* * * *

Usage Guideline

When running PPP in the lines of low speed WAN, the TCP header accounts for a large proportion in all the transmitting data, so TCP header-compression can be used to improve the efficiency of data transmission.

You can compress the headers of your TCP/IP packets in order to reduce the size of your packets. TCP header compression is supported on serial lines using Frame Relay, HDLC or Point-to-Point (PPP) encapsulation. You must enable compression on both ends of a serial connection. RFC 1144 specifies the compression process. Compressing the TCP header can speed up Telnet connections dramatically. In general, TCP header compression is advantageous when your traffic consists of many small packets, not for traffic that consists of large packets. Transaction processing (usually using terminals) tends to use small packets while file transfers use large packets. This feature only compresses the TCP header, so it has no effect on UDP packets or other protocol headers.

When compression is enabled, fast switching is disabled. This means that fast interfaces like T1 can overload the router. Consider your network's traffic characteristics before using this command.

Example

! Enable TCP header-compression at the PPP interface Serial0.

Quidway(config-if-Serial0)# ip tcp header-compression

Related Command

encapsulation ppp

Huawei Command Reference, Version 1.5, Volume 1, Module 04, pp. 2-4 to 2-5

http://datacomm.huawei.com/english/index.html

[Select "Document Center" link; then select "VRP Command and Configuration Manual" link; then select "Command ReferenceV1.5"; then select "Command Reference(V1.5)-Volume 1" link.]

Cisco "ip tcp header-compression" Command (2 of 2)

* * * *

Usage Guidelines

This command first appeared in Cisco IOS Release 10.0.ß

You can compress the headers of your TCP/IP packets in order to reduce the size of your packets. TCP header compression is supported on serial lines using Frame Relay, HDLC or Point-to-Point (PPP) encapsulation. You must enable compression on both ends of a serial connection. RFC 1144 specifies the compression process. Compressing the TCP header can speed up Telnet connections dramatically. In general, TCP header compression is advantageous when your traffic consists of many small packets, not for traffic that consists of large packets. Transaction processing (usually using terminals) tends to use small packets while file transfers use large packets. This feature only compresses the TCP header, so it has no effect on UDP packets or other protocol headers.

When compression is enabled, fast switching is disabled. This means that fast interfaces like T1 can overload the router. Consider your network's traffic characteristics before using this command.

Example

In the following example, the first serial interface is set for header compression with a maximum of ten cache entries:

```
interface serial 0
ip tcp header-compression
ip tcp compression-connections 10
```

Related Command

ip tcp compression-connections

ip tcp compression-connections

Cisco Network Protocols Command Reference, Part 1, Version 11.2, IP Commands, pp. V-142

http://www.cisco.com/en/US/products/sw/iosswrel/ps1824/products_command_reference_chapter09186a0080080d98.html

[Select "ip tcp header-compression" link, or select PDF file for entire document and go to cited page]

EXHIBIT A4

IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF TEXAS

MARSHALL DIVISION

CISCO SYSTEMS, INC. AND CISCO TECHNOLOGY, INC.

Plaintiffs,

v.

HUAWEI TECHNOLOGIES, CO., LTD., HUAWEI AMERICA, INC. AND FUTUREWEI TECHNOLOGIES, INC.,

Defendants.

CIVIL ACTION NO. 2:03-CV-027

DECLARATION OF CHARLES GIANCARLO IN SUPPORT OF PLAINTIFF CISCO'S MOTION FOR PRELIMINARY INJUNCTION

FILED UNDER SEAL

CONTAINS CONFIDENTIAL CISCO INFORMATION

CONFIDENTIAL

SUBJECT TO PROTECTIVE ORDER IN CIVIL ACTION NO. 2:03-CV-027

UNITED STATES DISTRICT COURT FOR THE

EASTERN DISTRICT OF TEXAS – MARSHALL DIVISION

Pltfs Exhibit 601

Date: 4/28/16 Witness: Giancarlo

Lana L. Lopez, [illegible]

IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF TEXAS

MARSHALL DIVISION

CISCO SYSTEMS, INC. AND CISCO TECHNOLOGY, INC., Plaintiffs, v. HUAWEI TECHNOLOGIES CO., LTD., HUAWEI AMERICA, INC. AND FUTUREWEI TECHNOLOGIES, INC., Defendants.	CIVIL ACTION NO. 2:03-CV-027 **DECLARATION OF CHARLES GIANCARLO IN SUPPORT OF PLAINTIFF CISCO'S MOTION FOR PRELIMINARY INJUNCTION**

I, Charles Giancarlo, declare as follows:

1. I make this declaration in support of Cisco Systems, Inc.'s and Cisco Technology, Inc.'s (collectively "Cisco") Motion for Preliminary Injunction against Huawei Technologies, Co., Ltd., Huawei America, Inc., and Futurewei Technologies, Inc. I have personal knowledge of the facts set forth in this declaration and, if called to testify as a witness, could and would competently testify to them under oath.

2. I am the Senior Vice President and General Manager of Technology Development at Cisco. I am also head of Cisco's Carrier Systems Group and Switching, Voice & Storage Group. I have been employed by Cisco since December 1994. Throughout my career at Cisco, I have been involved in the development of leading-edge high volume networking products, including Cisco routers. I have also been directly involved in the marketing of Cisco's products and in promoting Cisco's brand awareness.

3. Throughout my career at Cisco, I have also been involved in the design, development, and management associated with the proprietary computer operating system that

runs on Cisco's routers (as well as other Cisco internetworking devices) called the Cisco Internetwork Operating System (IOS).

A. **Cisco's Router Technology Is Very Valuable**

4. Cisco is a worldwide leader in the development of networking products for the Internet, including network routers. A router is a device that enables data and information to be transported from one network to another – locally, regionally, and internationally. Routers are the backbone of Internet traffic, routing packets of data as they are transported from sender to recipient. For example, the transmission of an e-mail message from Dallas, Texas to Hong Kong will pass through multiple routers as the packets of information comprising the messages pass from one network to another.

5. The science of routing packets of data through networks is complex and challenging and requires tremendous innovation and technological development to assure that messages are sent quickly and securely and arrive at their intended destination. As a pioneer in this area, Cisco has achieved renown for the technological superiority, convenience, and security of its routers, which in turn have facilitated the amazing growth of computer networks and the Internet.

6. Cisco came to its position of technological leadership by hard work and substantial investments in research and development. As a result of its endeavors, Cisco has created valuable intellectual property in the form of patents, copyrights, trademarks, and trade secrets that protect the technology it has created.

7. One of the core technologies contained in every Cisco router is the Cisco IOS, a proprietary computer program that manages the routing of packets through the router. IOS is the product of over 15 years of hard work and hundreds of millions of dollars in research and development investment.

8. A key component of Cisco's copyrighted IOS programs is Cisco's copyrighted "Command Line Interface" ("CLI"). The CLI is the interface by which users communicate with Cisco routers. It consists of an elaborate structure of textual commands that allow an

Information Technology ("IT") manager to configure and manage the router. Each command corresponds to a particular function that can be performed by the router. When a command is entered by the human operator, the router performs the function associated with that particular command.

B. Huawei Has Entered the U.S. Market With Infringing Routers, Software and Manuals

9. One of Cisco's competitors in the internetworking space is Huawei Technologies, Co., Ltd., ("Huawei"), headquartered in the People's Republic of China. Huawei is a multi-billion dollar company that conducts business throughout the world in the manufacture and sale of network communications equipment.

10. Huawei manufactures and sells a line of network routers, known as "Quidway" routers, that are designed to compete with Cisco's network routers. Huawei recently introduced its line of Quidway routers for sale in the United States. Huawei has promoted its Quidway Routers as interchangeable with Cisco routers, that is, providing compatible functionality. Huawei promotes its Quidway routers as substitutes for Cisco routers without any loss of functionality, performance, or security. Huawei even adopted Cisco's product numbering system for its Quidway routers to convey the point that a Quidway router is being offered as a "Cisco "clone." The computer software that operates on Huawei's routers, known as "VRP," could be downloaded in the U.S. via the Huawei website. User manual documentation for VRP and the user interface it implements was also available in the U.S. via Huawei's website.

11. As detailed in Cisco's complaint, Huawei has engaged in wholesale theft and copying of Cisco's intellectual property to develop its Quidway routers. According to Cisco's allegations, that theft includes the adoption of Cisco's patented processes, the unlawful access to and copying of Cisco's proprietary IOS source code, the copying of Cisco's CLI and the copying of Cisco's copyrighted user manuals. The overwhelming evidence of this theft is discussed in more detail in the other declarations submitted by Cisco in support of its Motion for Preliminary Injunction.

C. **Huawei's Unlawful Copying And Infringement Threatens Cisco With Substantial Irreparable Harm**

12. Huawei's unlawful copying of Cisco's copyrighted materials, including the IOS code, the CLI and the user manuals, will cause Cisco substantial irreparable injury if it is not enjoined by the Court. Cisco's proprietary IOS is one of the company's most valuable assets and a critical component of Cisco's business. The same holds true for the CLI user interface implemented by the IOS. This interface, which is unique to Cisco, has been developed over many years through the expenditure by Cisco of hundreds of millions of dollars. Cisco has also expended considerable effort and resources in training its customers on the CLI interface. One aspect of this effort is the extensive user documentation Cisco has prepared to describe IOS and the CLI and educate its customers on their use.

13. Huawei's unlawful copying of the IOS, CLI and manuals will cause Cisco substantial irreparable injury. First, Cisco loses the exclusivity and control to which it is entitled under the copyright laws. By copying the IOS, CLI and user manuals, Huawei has unlawfully deprived Cisco of the exclusive use of its copyrighted and proprietary materials. Consequently, Huawei can unfairly capitalize on the enormous customer goodwill and loyalty that Cisco has developed with its customer base through the many years of development and refinement of the IOS, the user interface and associated manuals.

14. Second, there is compelling evidence that Huawei unlawfully gained access and used the source code from IOS, which Cisco maintains as a trade secret. If Huawei is allowed to continue to possess copies of Cisco's source code, it will be in a position to continue to use or disclose this source code to others, which would cause even more injury to Cisco. The use and disclosure of Cisco's confidential source code undermines the competitive advantage that Cisco has by keeping its source code confidential.

15. Third, Cisco will be irreparably injured because Huawei, a competing seller of internetworking equipment, will be able to enjoy a "free ride" on Cisco's work, innovation and customer development. Because it chose copying over independent development, Huawei has avoided the substantial investments made by Cisco (and by other competitors that have not stolen

Cisco's intellectual property) in developing an operating system and user interface. Huawei also has avoided the effort and expense in training customers on the use of an operating system and user interface that Cisco and other internetworking vendors have faced. Huawei now can simply ride on Cisco's coat tails, and approach Cisco's customers with claims of Cisco functionality. Huawei's unlawful conduct, therefore, gives it the opportunity to literally steal business opportunities away from Cisco by using Cisco's technology and intellectual property. Cisco Customers approached by Huawei may not understand that the Quidway routers' mimicry of Cisco's advanced features and functionality are made possible by the infringement of Cisco's intellectual property; those customers may then shift their allegiance from Cisco without any awareness of Huawei's unlawful acts. Once customers are lost, it is always difficult to recover them. Huawei's marketing pitch to prospective customers not only threatens Cisco with a substantial loss of market share, but threatens the valuable customer goodwill Cisco has developed over many years of business.

16. Finally, Huawei's theft of Cisco's technology means that Cisco must now compete in the marketplace directly against its own technology. Unless Huawei is enjoined, Cisco is deprived of the right to enjoy the full benefit of its proprietary technology.

D. Conclusion

17. Cisco has expended a great deal of time, money, and resources in the creation of its proprietary IOS, CLI, and user manuals. By choosing to disregard Cisco's intellectual property rights, Huawei has avoided the intellectually challenging process of developing its own intellectual property. If not enjoined, Huawei's actions will render the protections Cisco has sought through the copyright laws meaningless. Huawei actions also threaten to erode Cisco's relations with its customers and deprive Cisco of its hard-earned goodwill. As such, Huawei's actions threaten Cisco with substantial irreparable harm.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct. Executed this 3rd day of February, 2003 at San Jose, California.

Charles Giancarlo

EXHIBIT A5

REDACTED VERSION OF DOCUMENT SOUGHT TO BE SEALED

Redacted in its Entirety

EXHIBIT A6

REDACTED VERSION OF DOCUMENT SOUGHT TO BE SEALED

Redacted in its Entirety

EXHIBIT A7

ARISTA

Arista in Q3 2017

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Safe Harbor

This presentation and the accompanying oral presentation contain forward-looking statements that are based on our management's beliefs and assumptions and on information currently available to management. Forward-looking statements include all statements other than statements of historical fact contained in this presentation, including information concerning our business plans and objectives, total addressable market, potential growth opportunities, market potential by speed, trends relating to increase in storage, the router market, competitive position, benefits of Arista's platforms, industry environment and potential market opportunities.

Forward-looking statements are subject to known and unknown risks, uncertainties, assumptions and other factors that could cause actual results, performance or achievements to differ materially from those anticipated in or implied by the forward-looking statements including risks associated with: Arista Networks' dispute with Cisco Systems, Inc. including the ITC remedial orders which prohibit the importation of Arista products (or components thereof) into the U.S., or the sale of previously imported products, Arista Networks' ability to redesign its products in a manner not covered by such remedial orders and obtain appropriate governmental approvals for those redesigned products, any penalties assess by the ITC if Arista does not obtain such governmental approvals and Arista Networks' ability to manage our manufacturing and supply chain including the sourcing of components on commercially reasonable terms, if at all; Arista Networks' limited operating history; Arista Networks' rapid growth; Arista Networks' customer concentration; our customer's adoption of our redesigned products and services; requests for more favorable terms and conditions from our large end customers; declines in the sales prices of our products and services; changes in customer order patterns or customer mix; increased competition in our products and service markets, including the data center market; dependence on the introduction and market acceptance of new product offerings and standards; rapid technological and market change; the evolution of the cloud networking market and the adoption by end customers of Arista Networks' cloud networking solutions; Arista Networks' dispute with OptumSoft; and general market, political, economic and business conditions. Additional risks and uncertainties that could affect Arista Networks can be found in Arista's Quarterly Report on Form 10-Q filed with the SEC on November 3, 2017, and other filings that the company makes to the SEC from time to time. You can locate these reports through our website at http://investors.arista.com and on the SEC's website at www.sec.gov.

You should not rely upon forward-looking statements as predictions of future events. Although our management believes that the expectations reflected in our forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances described in the forward-looking statements will be achieved or occur. Moreover, neither we, nor any other person, assume responsibility for the accuracy and completeness of the forward-looking statements.

This presentation is being provided as of November 8, 2017 and the forward looking statements and any other statements contained herein speak only as of the date of this presentation, and we undertake no obligation to publicly update any forward-looking statements or any other statements in this presentation for any reason after the date of this presentation to conform these statements to actual results or to changes in our expectations, except as required by law.

In addition to GAAP financial information, this presentation includes certain non-GAAP financial measures. The non-GAAP measures have limitations, and you should not consider them in isolation or as a substitute for our GAAP financial information. There are limitations to the use of non-GAAP measures. Non-GAAP gross margins and non-GAAP operating income exclude the impact of stock-based compensation expenses, expenses associated with the OptumSoft and Cisco litigation, and other non-recurring charges or benefits. See the Appendix for a reconciliation of all non-GAAP financial measures to their nearest GAAP equivalent.

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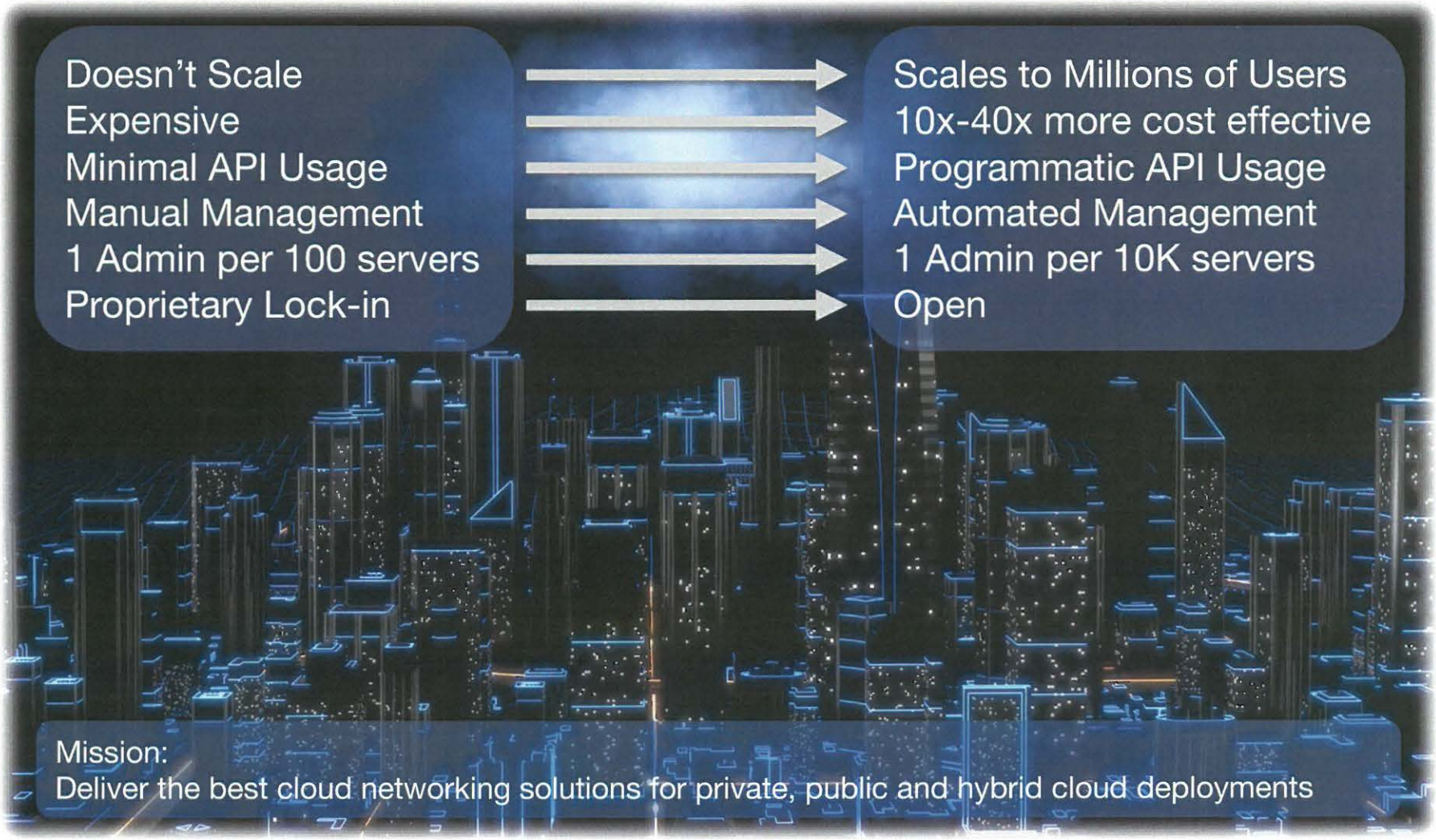
Arista Software Driven Cloud Networking



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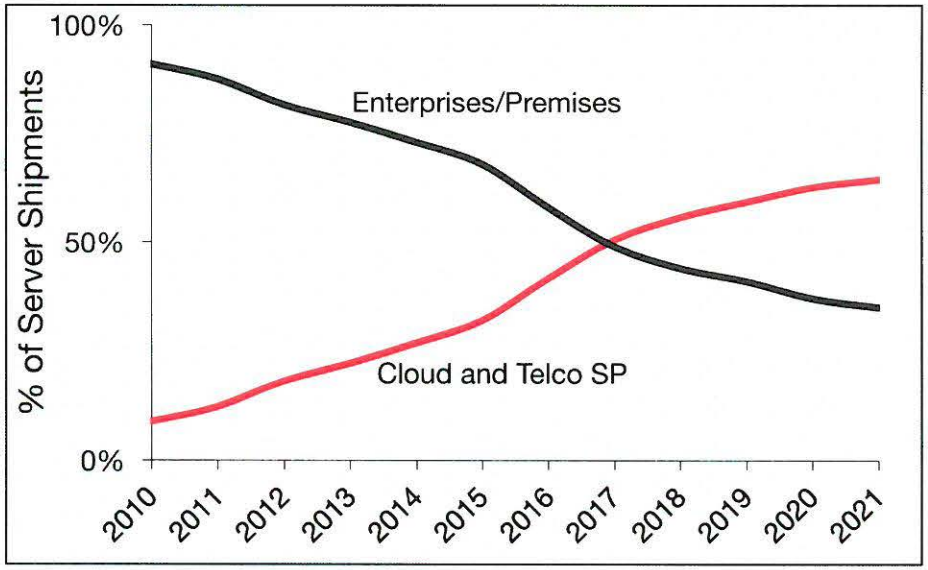
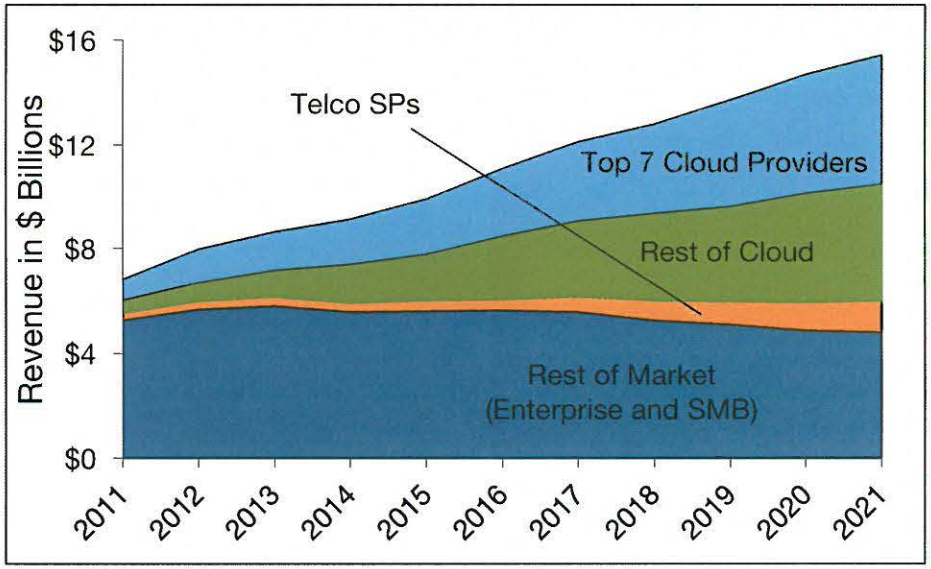
Arista's Cloud Networking Opportunity

Server Shipments



Source: Dell'Oro Group Server Research

Data Center Ethernet Switch Revenue



Source: Dell'Oro Ethernet Switch Market Update Q2'17

- Enterprise workloads are migrating to public & hybrid clouds
- Traditional enterprise served <100,000 employees vs. Clouds @ hundreds of millions of users
- The emergence of cloud native apps & containers necessitates a new architecture

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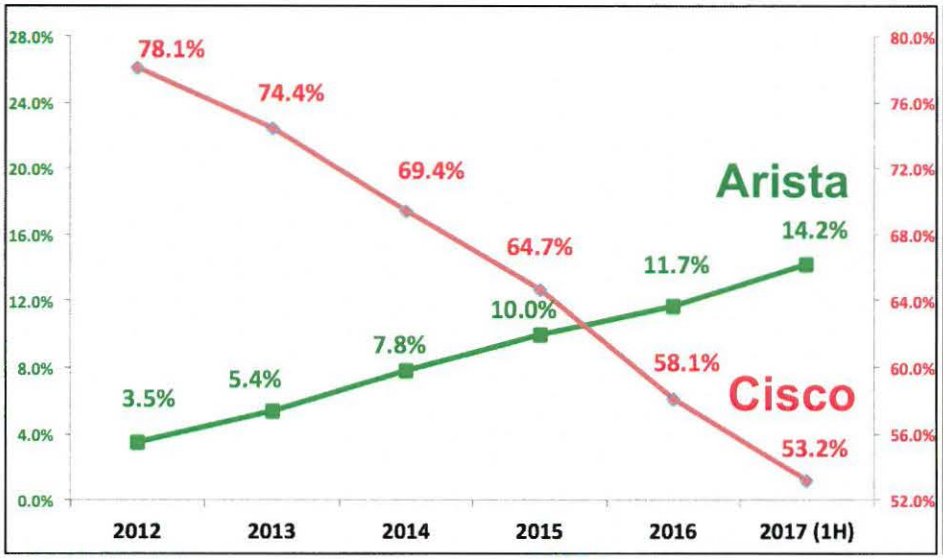
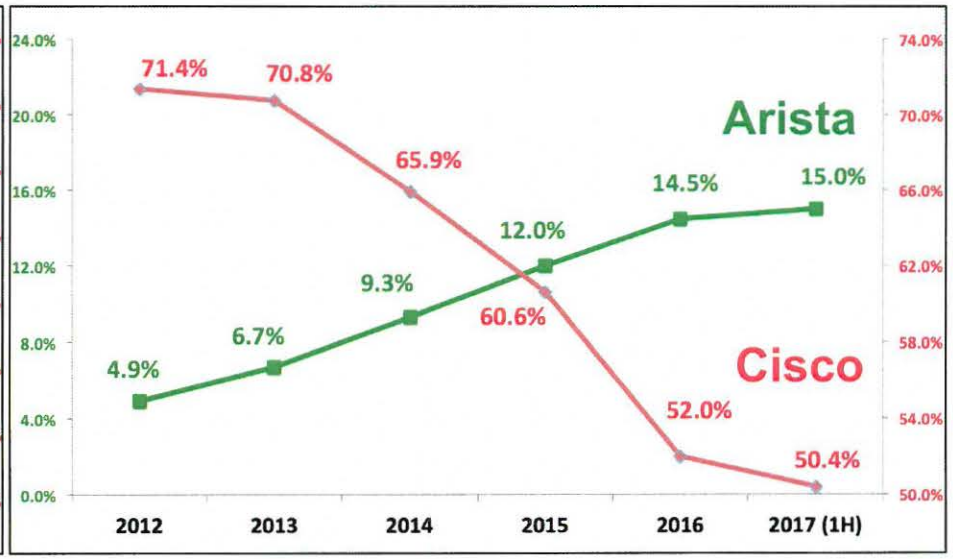
Arista Market Share vs Cisco
High Speed Data Center Switching Market

Share in Dollars



Share in Ports



Source: Crehan Research Datacenter Switch Market Share Report Q2'2017

Note: Excludes blade switches

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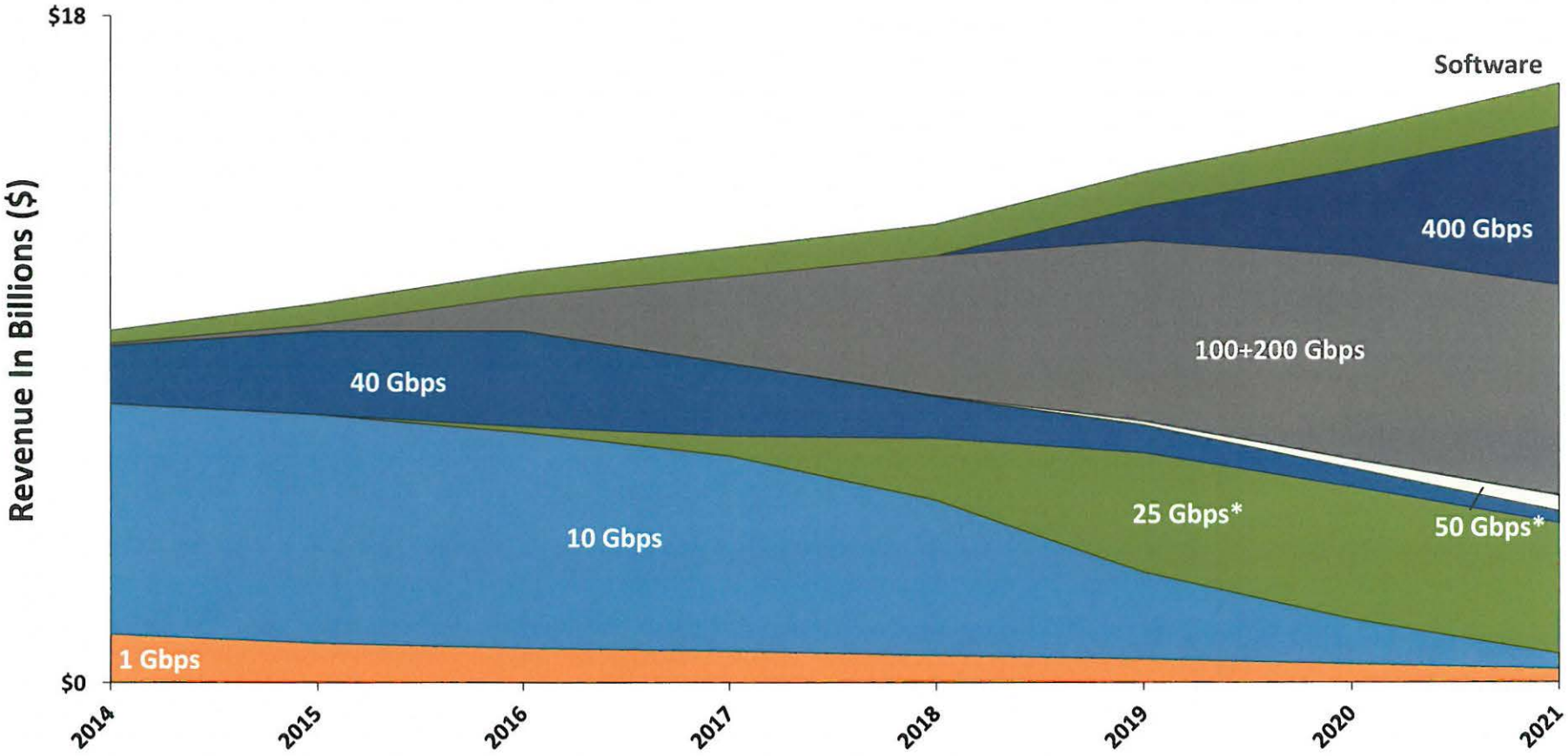
Market Potential by Speed

Data Center Ethernet Switch Revenue ($Bn)



Source: 650 Group Long Term Ethernet Switch forecast June 2017

*Shows discrete 25G or 50G ports only. A significant portion of 25/50GE server ports are expected to connect via QSFP-100G break out to 100 GE switch ports at the large Cloud Service Providers.

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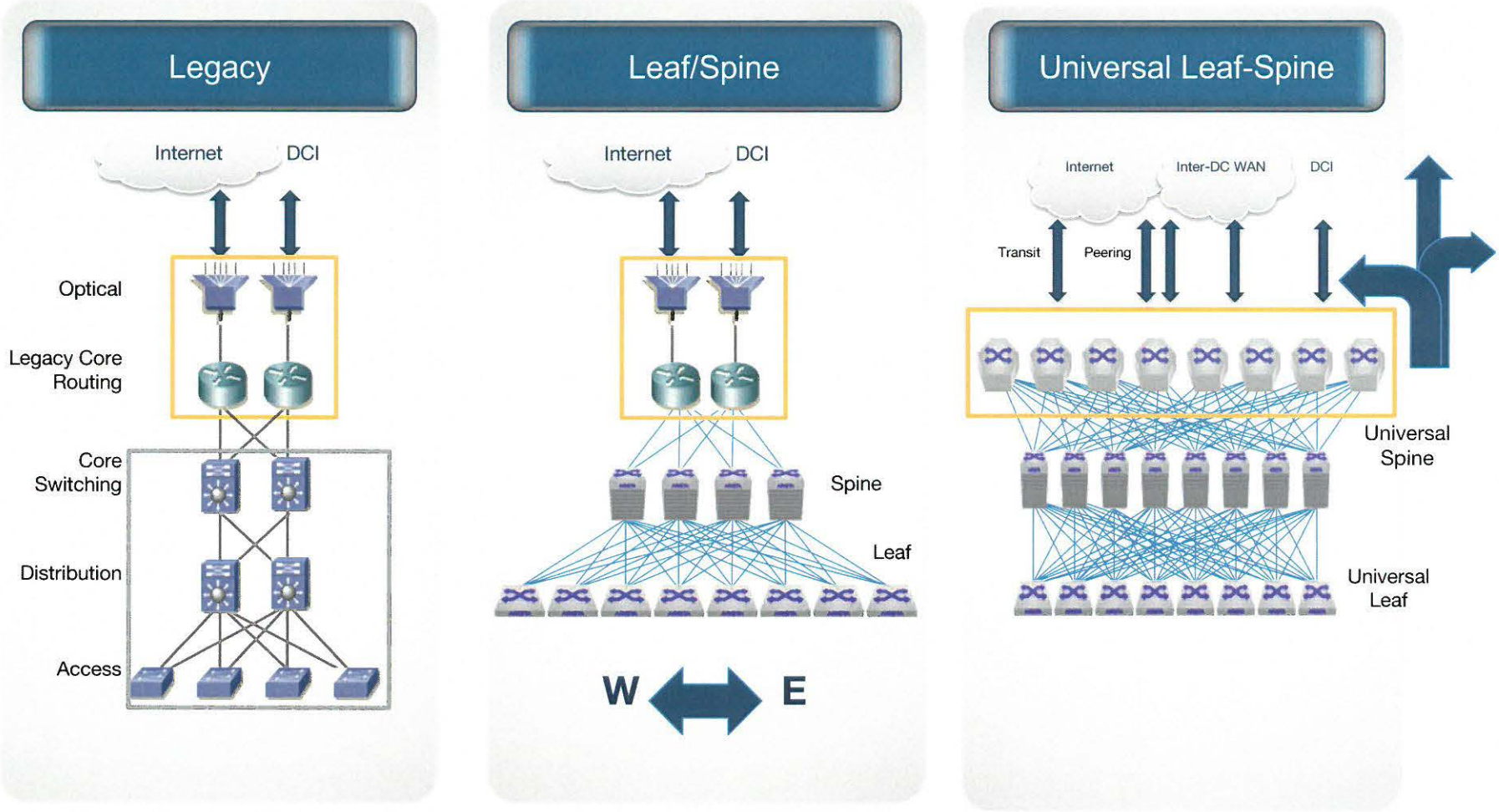
Evolution of the Universal Cloud Network Architecture



Routing is Integrated into the Universal Spine and Leaf

ARISTA

Proven Architecture Flexibility

Open, Programmable, Modular, Scalable

Automation, Telemetry, Diagnostics

EOS CloudVision®

One Tool for Automation, Control, Telemetry and Diagnostics

EOS cEOS vEOS router

One Image, Flexible Packaging Option

Arista EOS

Abstraction Layer

Hardware System Design

Leading Performance in Cooling, Energy Efficiency, Serviceability, Scale and Breadth of Optics

Merchant Silicon

12 Silicon Families

Jericho Trident-II+ Tomahawk+

Alta Arad Trident-II Tomahawk

Bali Petra Trident+ Helix XP80

10G, 25G, 40G, 50G, 100G → 400G

Leading Performance Best of Breed Merchant Silicon

ARISTA

A Single Image Architecture Underpins a Sustainable Competitive Advantage

Switching, Routing, DCI on Universal Leaf, Universal Spine

Containerized EOS, running on Arista or whitebox

Seamless Private/Hybrid Cloud Integration

Q: Why a single image?
A: It improves network availability, saves time and money. How? Dramatically reduces new release qualification time. Simplifies PIC interoperability. Simplifies and scales automation.

*PICs – Places in the Cloud – i.e. On Premise Leaf/Spine, CoLo, Public Cloud

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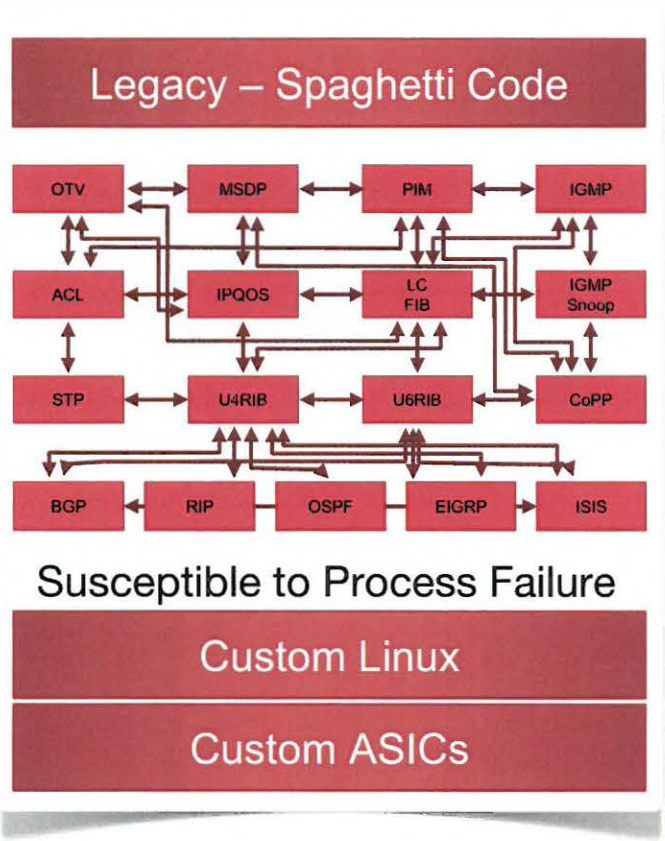
Arista's Cloud Scale Software Architecture

- Differentiated Advantages
  - Modern, open, and scalable architecture
  - Software Quality



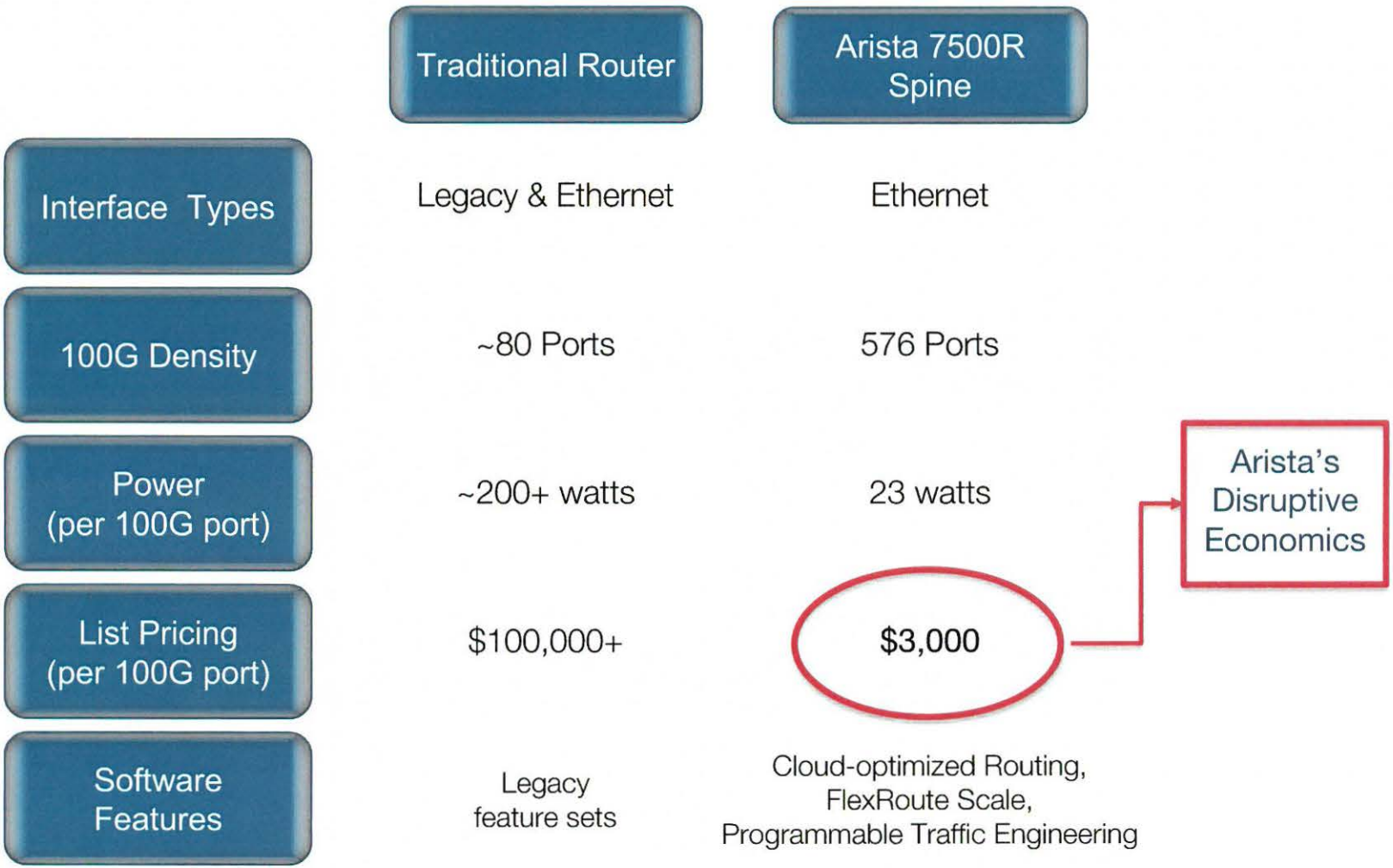
Resilient

Programmable

Scalable

ARISTA

Disruptive Cloud Economics for Routers



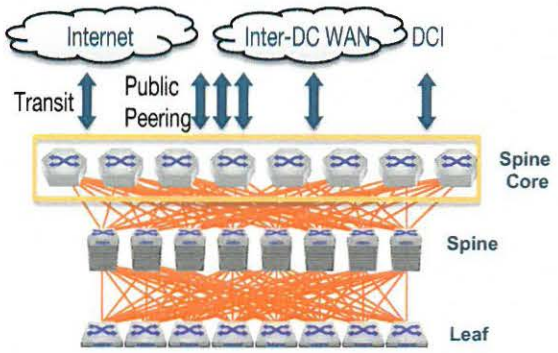
7500R disrupting router market w/100GbE routing transition

ARISTA

Expanding Routing Use Cases- Arista's Universal Leaf & Spine

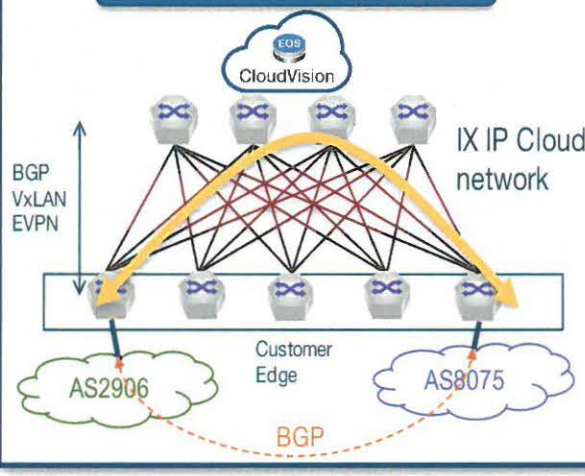
ARISTA FlexRoute™

Cloud DCI

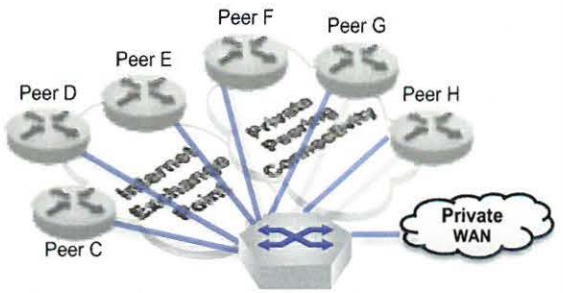


DC Universal Spine

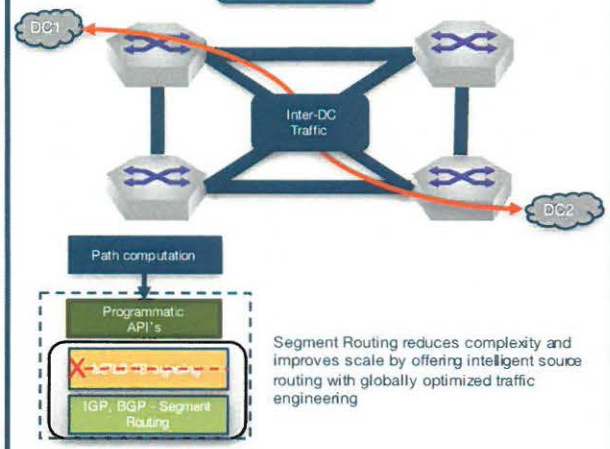
IX Cloud



Peering and Interconnect

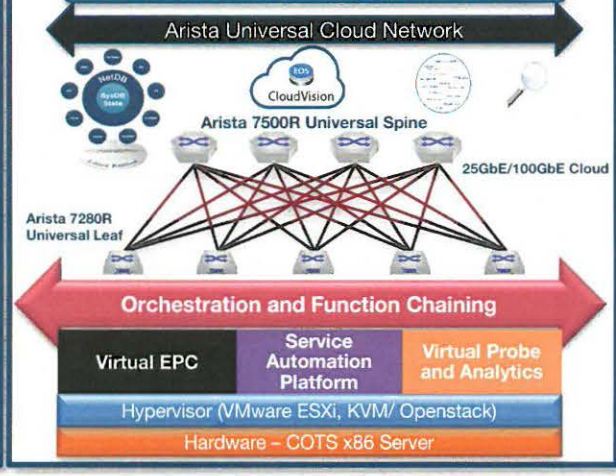


WAN

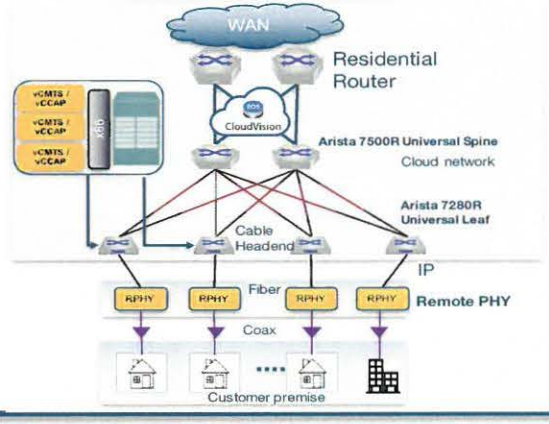


Segment Routing reduces complexity and improves scale by offering intelligent source routing with globally optimized traffic engineering

Mobile Packet Core NFV



Residential & Business Cable, DSL, Fiber



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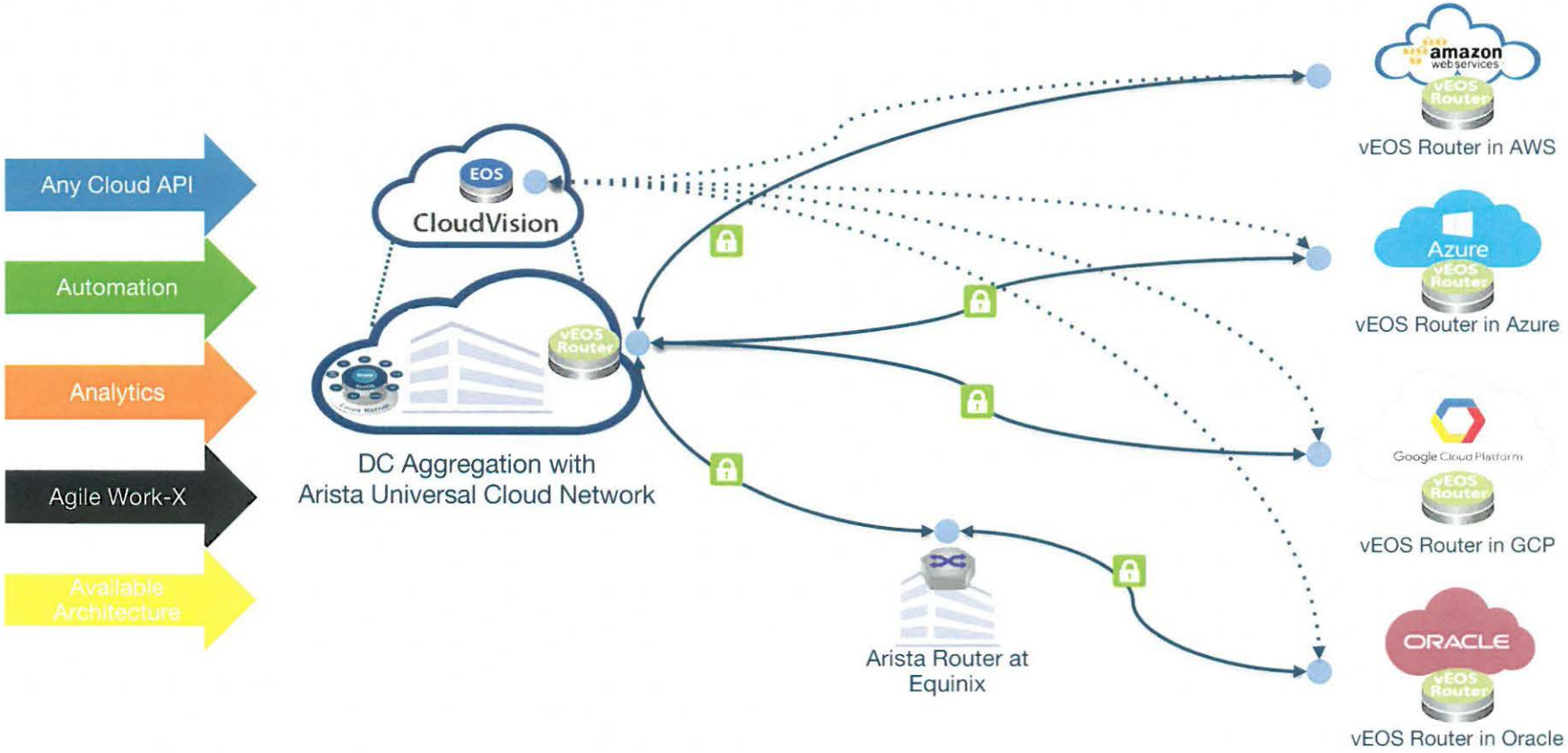
Arista Any Cloud Platform
Hybrid Cloud Networking Anywhere

Private Cloud | Cloud Exchange | Public Cloud



Operational Consistency Across Multiple Clouds

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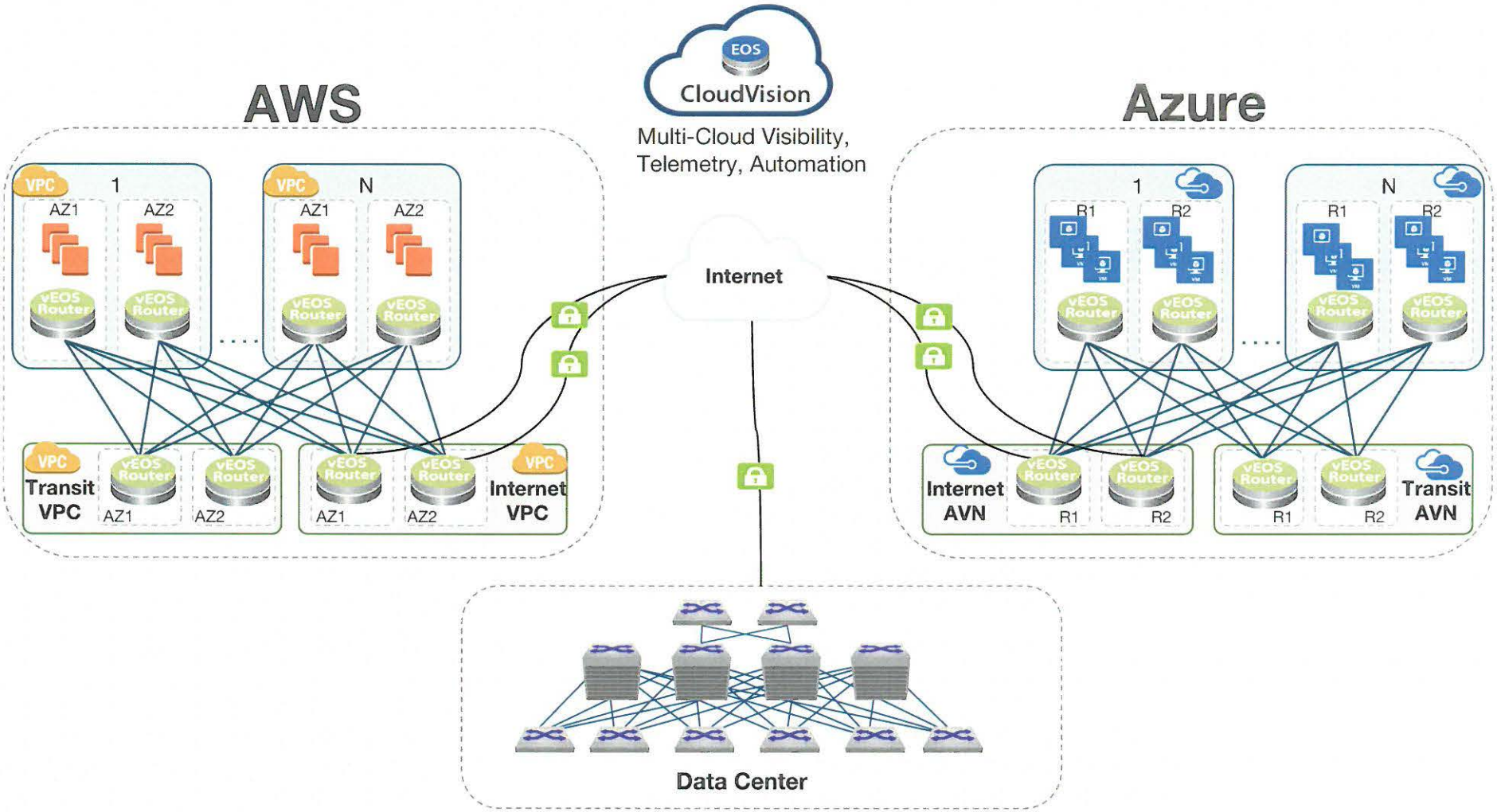
Segmenting the Cloud with Multiple Cloud Providers



Cloud Networks are Segmented into Multiple Virtual Private Clouds Offered by Multiple Cloud Providers

ARISTA

Expanding Ecosystem

- Drive **Automation** with best of breed partners: security, overlays, orchestration, and storage
- Advanced **Analytics** and network wide services
- **Any Work-X** with CloudVision for workloads, workflows and work-streams

ARISTA

Cloud-Class Market Leadership Platform Portfolio

Single-Image Arista EOS Across All Platforms

Spine/Spline™

7300X Series

7500E/R Series

Leaf

EOS

Leaf EOS

7050X/7060X Series

Volume

7150, 7160 & 7280R Series

Value

Diverse Merchant Silicon Architectures

ARISTA

Scaling up the Cloud

Next Generation (R2) Universal Spine and Leaf

ARISTA AlgoMatch™

Common single EOS image, Deep Buffer, Lossless Architecture, Large Tables

Choice of form factors, density and port speeds for varying use cases

Standards based switching for reliable deployments

36 100G QSFP ports
MACSEC and 1.3M FlexRoute

36 100G QSFP ports
1.3M and 2M FlexRoute, AlgoMatch and sFlow

18 100G QSFP ports
1.3M FlexRoute

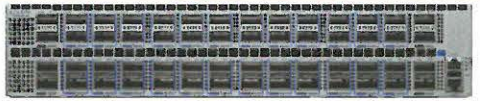
48 10G/25-SFP+, 2 x 100G ports
2M FlexRoute, AlgoMatch and sFlow

7500R Line Cards

7500R Systems

7500R Universal Spine

30 QSFP100
1.3M and 2M FlexRoute, AlgoMatch and sFlow



60 QSFP100
1.3M and 2M FlexRoute, AlgoMatch and sFlow

48 10/25G-SFP / 6 QSFP100
1.3M FlexRoute and AlgoMatch

7280R Universal Leaf

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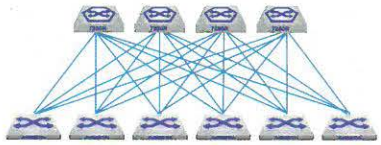
Cloud Networking is Everywhere: Three Key Markets – One Architecture – One EOS

Arista Cloud Converged

Enterprise

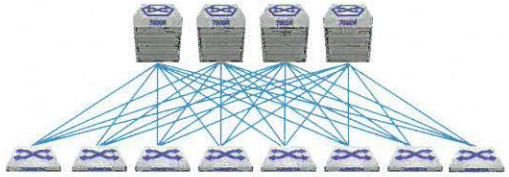


Turnkey Driven

Arista Cloud Class

Key Verticals

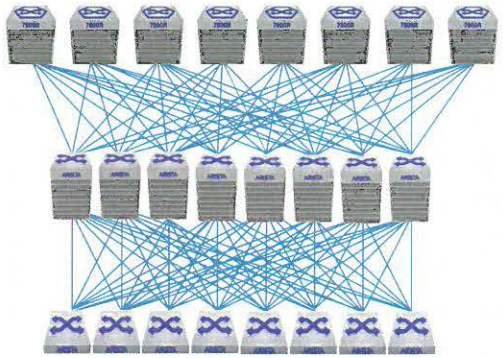
or



Best of Breed Driven

Arista Cloud Scale

Cloud Titans



Scale and Control Driven

ARISTA

CloudVision: Multi-Function Hybrid Cloud Platform

Overlay Integration

API's for simplified network integration to a best of breed ecosystem

Telemetry & Analytics

Real-time state streaming and historical analytics

Automated Deployments

Initial and ongoing provisioning network-wide

Macro-Segmentation Services (MSS)

Service insertion for securing today's cloud networks

Change Controls

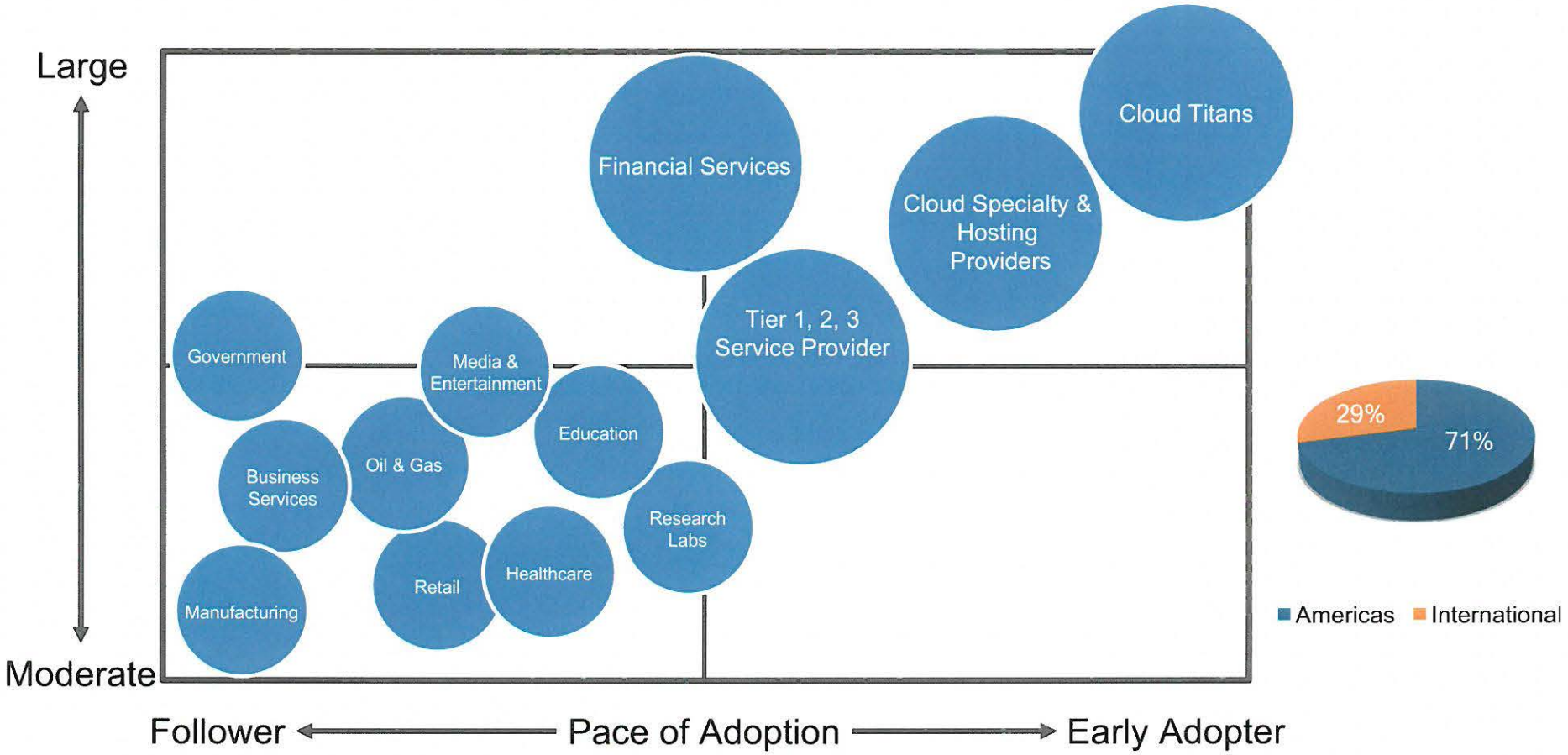
Network-wide upgrades, rollback and snapshots. Compliance and Bug Visibility

DANZ TAP Aggregation

Purpose-built to capture traffic at cloud scale and speed

ARISTA

Major Verticals



Note: By Billings. Only selected verticals shown. Diagram not to scale.

ARISTA

Foundational Technology Underpins TAM Expansion

- We partner with customers and follow their journey
- EOS software drives repeat purchases, Arista cultivates customer advocacy
- EOS software organically enables additional use cases

Top 15 Customers	Q4 2014	Q1 2015	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Q2 2017	Q3 2017
Customer1												
Customer2												
Customer3												
Customer4												
Customer5												
Customer6												
Customer7												
Customer8												
Customer9												
Customer10												
Customer11												
Customer12												
Customer13												
Customer14												
Customer15												

Additional Purchases

Did Not Purchase

Chart illustrates the top 15 customers based on the last 12 quarters of total product and service billings.

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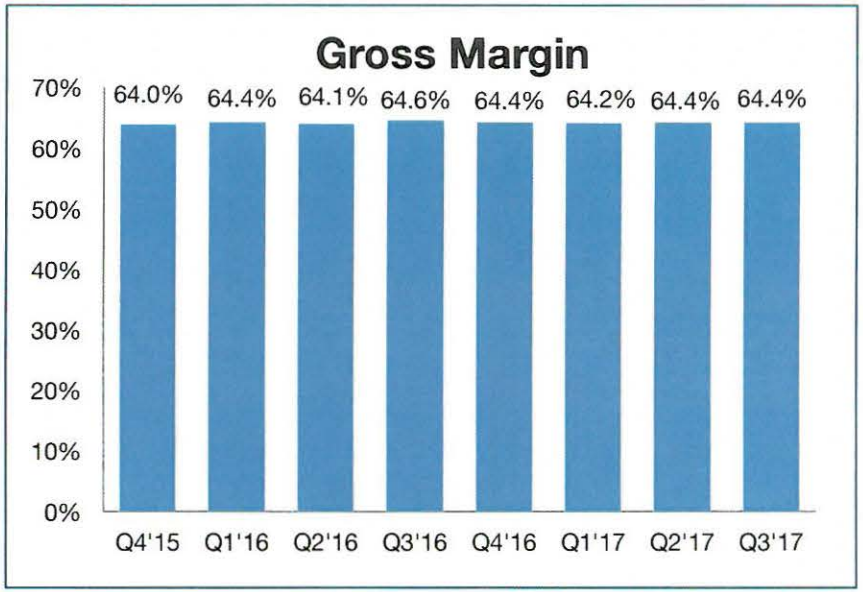
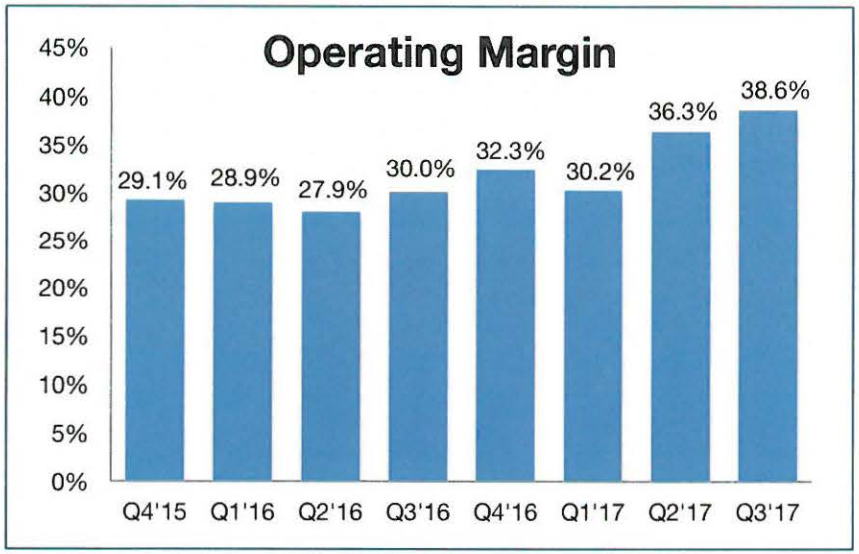
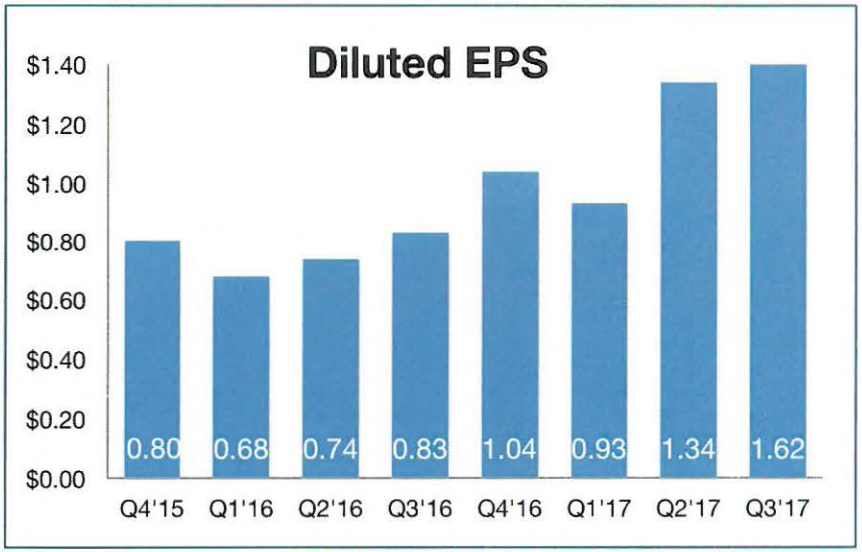
Financial Highlights[1]







[1] Amounts are non-GAAP except for Revenue; refer to reconciliation between non-GAAP and GAAP in the appendix.

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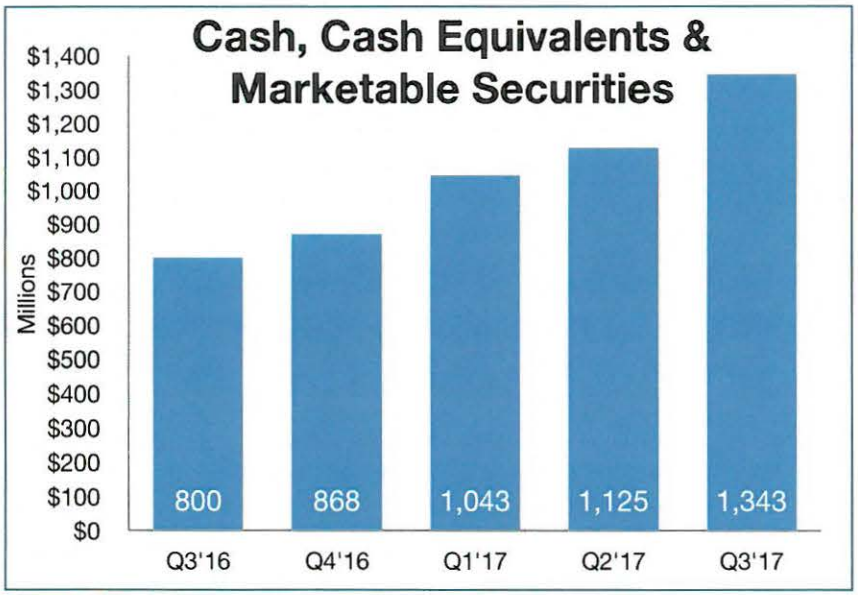
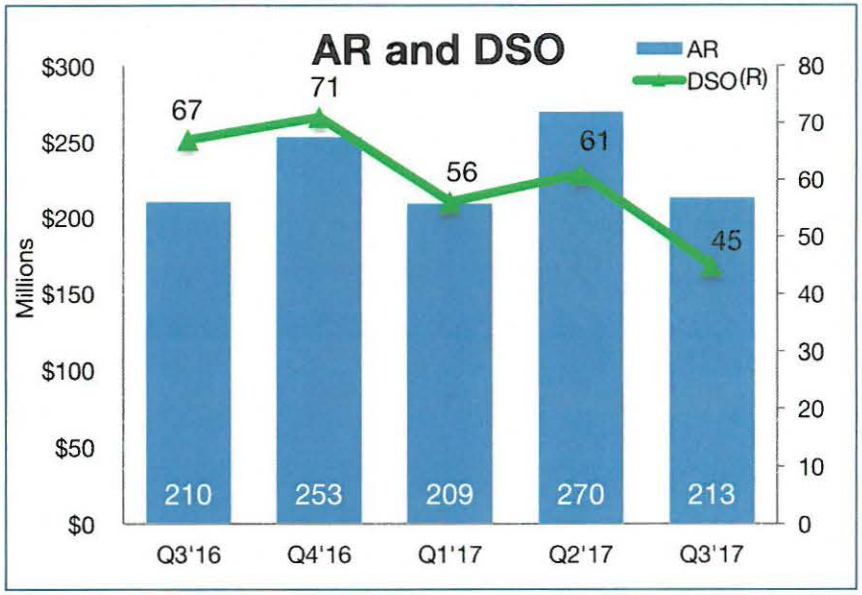
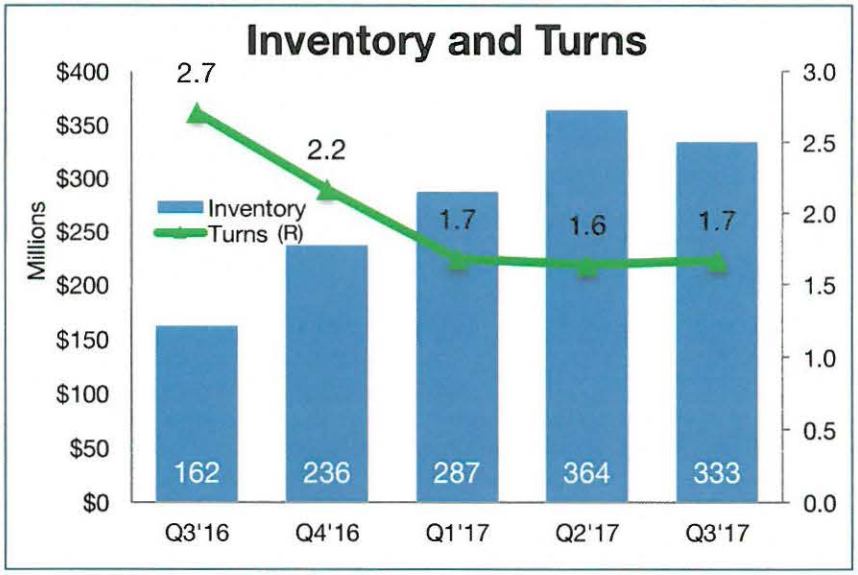
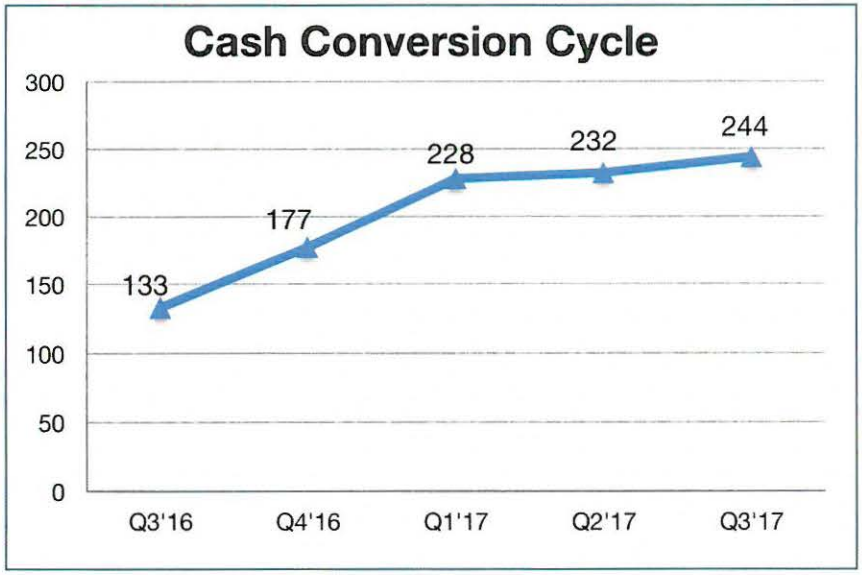
Balance Sheet & Cash Conversion Cycle









ARISTA

Arista in Q3 2017

Key Highlights	Financial Results (non-GAAP)[1]
Introduced Arista Any Cloud software platform, reducing operational costs and complexity for enterprises by simplifying integration and management of hybrid clouds across private cloud datacenters and public cloud providers.	*Q3'17 Revenue: $437.6M* *Q3'17 EPS: $1.62*
Arista Networks makes the top 10 in FORTUNE magazines 100 Fastest-Growing Companies September 2017 issue.	*Q3'16-Q3'17 YOY Revenue Growth: 51%*
Continued adoption of Cloud Networking across key verticals.	*Q3'17 Gross Margin: 64.4%*
	Q3'17 Operating Margin: 38.6%

Mission:

Deliver the best cloud networking solutions for private, public and hybrid cloud deployments

[1] Amounts are non-GAAP except for Revenue; refer to reconciliation between non-GAAP and GAAP in the appendix.

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Appendix: GAAP to Non-GAAP Reconciliation

In 000's except per share data	Q4'15	Q1'16	Q2'16	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17
GAAP gross profit	$ 156,168	$ 155,090	$ 171,451	$ 186,420	$ 210,155	$ 214,210	$ 259,777	$ 280,617
GAAP gross margin	*63.6%*	*64.0%*	*63.8%*	*64.2%*	*64.1%*	*63.9%*	*64.1%*	*64.1%*
Stock-based compensation expense	842	793	868	955	1,004	1,024	1,087	1,113
Non-GAAP gross profit	$ 157,010	$ 155,883	$ 172,319	$ 187,375	$ 211,159	$ 215,234	$ 260,864	$ 281,730
Non-GAAP gross margin	*64.0%*	*64.4%*	*64.1%*	*64.6%*	*64.4%*	*64.2%*	*64.4%*	*64.4%*
GAAP income from operations	$ 49,397	$ 49,735	$ 53,158	$ 63,021	$ 77,495	$ 73,418	$ 116,634	$ 140,832
GAAP operating margin	*20.1%*	*20.5%*	*19.8%*	*21.7%*	*23.6%*	*21.9%*	*28.8%*	*32.2%*
Stock-based compensation expense	12,978	13,360	14,232	15,116	16,324	16,439	18,400	20,152
Litgation expenses	8,956	7,005	7,594	9,025	12,209	11,466	11,957	7,857
Non-GAAP income from operations	$ 71,331	$ 70,100	$ 74,984	$ 87,162	$ 106,028	$ 101,323	$ 146,991	$ 168,841
Non-GAAP operating margin	*29.1%*	*28.9%*	*27.9%*	*30.0%*	*32.3%*	*30.2%*	*36.3%*	*38.6%*
GAAP diluted net income to common stockholders	$ 43,464	$ 34,941	$ 38,635	$ 50,980	$ 58,542	$ 82,716	$ 102,474	$ 133,555
Net income attributable to participating securities	460	304	269	277	241	245	211	167
Stock-based compensation expense	12,978	13,360	14,232	15,116	16,324	16,439	18,400	20,152
Litigation expenses	8,956	7,005	7,594	9,025	12,209	11,466	11,957	7,857
Excess tax benefits on stock-based awards	-	-	-	-	-	(28,790)	(19,079)	(23,826)
Release of income tax reserves	(968)	-	-	(6,293)	-	-	-	-
Tax effect of non-GAAP exclusions	(7,424)	(6,524)	(7,056)	(7,924)	(9,836)	(10,269)	(8,493)	(9,683)
Non-GAAP net income	$ 57,466	$ 49,086	$ 53,674	$ 61,181	$ 77,480	$ 71,807	$ 105,470	$ 128,222
GAAP diluted income per share to common stockholders	$ 0.60	$ 0.48	$ 0.53	$ 0.69	$ 0.79	$ 1.07	$ 1.30	$ 1.68
Non-GAAP adjustments to net income per share	0.20	0.20	0.21	0.14	0.25	(0.14)	0.04	(0.06)
Non-GAAP diluted income per share	$ 0.80	$ 0.68	$ 0.74	$ 0.83	$ 1.04	$ 0.93	$ 1.34	$ 1.62
GAAP and non-GAAP weighted diluted shares	72,062	72,214	72,817	73,453	74,384	77,516	78,756	79,322

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NETWORKWORLD Reprint

THE CONNECTED ENTERPRISE ≡ FEBRUARY 22, 2013

How Arista Networks got out in front of the SDN craze

Arista CEO Jayshree Ullal says 'cloud networking leader' complements Cisco

BY JOHN GALLANT, NETWORKWORLD

Today, the buzz in networking is all around software-defined networks — and nothing could make Arista Networks CEO Jayshree Ullal happier. Ullal spent 15 years at Cisco, where she ran the network giant's core switching and data center businesses, before joining Arista, which was founded by Sun Microsystems co-founder and Chief System Architect Andy Bechtolsheim and David Cheriton, a Stanford University professor of computer science and electrical engineering (and fellow Cisco alumnus). Ullal says Arista's data center switches were born to support SDN and provide both the power and flexibility required for today's highly virtualized corporate and cloud data centers. In this installment of the IDG Enterprise CEO Interview Series, Ullal spoke with Chief Content Officer John Gallant about the reality and hype around SDN, and why the data center requires a different network than your father's general-purpose Cisco net. She also explored how her work at Cisco shaped Arista's strategy, and shared insights on how Arista's partnerships with VMware and Cloudera are making it easier to move to cloud and embrace big data, respectively.

There are a lot of networking alternatives out there. Why should someone buy from Arista?

Arista saw three disruptions in the market: a hardware disruption; a software disruption; and a customer buying disruption, which in my mind is the most important thing. You can invent all you want on the technology side, but you have to see the customers changing their market position.

The hardware technology disruption was that in the 1990s, the only way to build any kind of high-speed networking was through your own in-house ASICs [application-specific integrated circuits] and specialty chips. That's not true anymore. We have from three to five vendors available, whether it's Intel, Broadcom or others, supplying us much of the silicon. They are sometimes an order of magnitude better in power, footprint, density, latency, and performance and scale. Arista was able to take advantage of that disruption in hardware.

The second is software. We were very inspired by Cisco's software focus on the enterprise side, Juniper's on the service provider side, and we saw that we could build a purpose-built, modern operating system only for the data center and the cloud. We didn't try to do it for general-purpose networking. We really focused on our mission, which is high-performance applications for the data center and cloud. It's called Extensible Operating System (EOS) and there is no networking operating system that is as modern, self-healing and resilient, and [designed for the cloud].

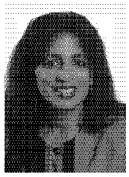
And the third, speaking of that, is the cloud itself. The enterprise market is shifting. Every CIO is being demanded a strategy on what they are doing with the cloud in terms of applications and infrastructure. Whether it's a private cloud, a public cloud or a hybrid cloud, these are becoming an important piece of the strategy. As Amazon innovated on the application side, you can think of Arista as really providing that market disruption on the networking side.

Explain the cloud angle in a little more depth. What were you setting out to do to support or enable cloud?

More and more people are outsourcing to modern applications — whether it's Salesforce.com or Amazon itself. [They're supporting] high-performance computing, or high-frequency trading or, increasingly now, big data and network virtualization. The network infrastructure needs to adapt. It cannot be so monolithic. It cannot be one physical port equals one VLAN equals one network switch. It really needs to be much more massive in scale. A typical enterprise network is a 10,000-node, three-tier network, and we were able to build a much flatter, fatter topology at Layer 2 and 3, using what we call the leaf-spine architecture that can scale to 50,000 to 100,000 nodes. That was our first premise.

The second [thing we focused on] was application delays. Don't build a network as a cost center, but really build it as a profit center by addressing the applications themselves. We early on entered the high-frequency trading market to understand their trading algorithms, map it to the latency requirements. That became an instance of a high-performance financial cloud where they started building the network for that application separate from the enterprise network.

> Our top five differentiators are all tied to our software."
>
> — *Jayshree Ullal, CEO, Arista Networks*



In Silicon Valley, a large number of Web 2.0 providers, whether they're search engines or social networking, the kind of scale they build is just unbelievable. It's 100,000 nodes, and increasingly, one machine, one physical server, is not one node. That's 20 virtual machines, which means you could be enabling 100,000 physical nodes but you are really enabling 1 million virtual nodes. There's huge virtual machine sprawl and physical sprawl. The CPU at one point wasn't being fully utilized. But now, with the new multi-core CPUs, the pressure is back on the network. That's why whether it's a private or a public cloud, the Web 2.0 companies are moving massively to high-density 10G, 40G and 100G [networks] that are requiring a new type of architecture and new software as well.

What are the things that make you different than a general-purpose networking company like Cisco?

At the highest level I would say our software, our EOS. It's open, it's built out of straight Linux. But then we added what we call multi-processing, state-oriented software that allows you to do the kind of things that you could only do in mainframes and servers. It's funny how hardware changes every 18 months in networking, but software doesn't change for decades and has remained monolithic

for so long. Our top five differentiators are all tied to our software.

The first is that we build, without using any proprietary components, active/active networks that can scale to 50,000 and 100,000 nodes. Other companies try to do that with proprietary technologies. You may be aware of Juniper's QFabric or Cisco's FabricPath and OTV [Overlay Transport Virtualization]. We are able to do it in a standards based fashion, and every one of our networks interoperates with Cisco routers, Juniper switches, NetScreen firewalls, you name it.

The second is, because of the software, we were able to bring to the data center and cloud what we call self-healing resilience. Usually, redundancy and resilience means buy two of everything and connect them in case one fails. It's great for the vendor to get two of everything. But we were able to do it right in our software. Today, you look at software agents and how they interact. If you have a memory leak in software today, and the agents talk to each other in a traditional network operating system, they do so with something called IPC, inter-process communication. But think of the cloud where you have, like we described, 100,000 of these, the multiplier effect of failure is huge with this inter-process communication. Arista chose a publish/subscribe model using a built-in SYSDB database, where the state of every software agent is stored. Because that's not human-generated, it's the most resilient piece of code. Let's say you have a failure. We automatically track the failure and contain it. Then we repair it. We actually spin up a new agent. Today's enterprise agent manager has no maintenance windows. So they don't have to know.

The third [differentiator] is that we are open and programmable. You hear a lot of talk about SDN these days, and one has to separate the hype from the reality. The essence of SDN to me is, first of all, build open interfaces and allow your customers to write to their applications through our APIs at the northbound level, and at the southbound level our devices must be programmable. We didn't call it SDN back when we developed this, we called it EOS. The extensible in EOS is [in reference to the operating system being] very programmable. Every aspect of our software, whether it's at the hardware plane, at the device plane or the software plane, can be programmed. That's a huge advantage. We find ourselves in a fortunate position that as the SDN market is evolving, our network is already open and programmable and SDN-ready.

The fourth one is big data analysis. Data analysis and traffic visibility is becoming a real weakness, because, as you know, we can all talk about improving price, performance and CAPEX, but the biggest cost center in networks is OPEX. There are three ways to solve OPEX issues: Stop buying gear, outsource your gear or make your technology do better work. We believe technology to solve the problem is far better than outsourcing or throwing people at the problem. We call this "from A to Z analysis." We can do automation, we can do zero-touch provisioning, we can do a suite of functions here because data is coming at such amazing speeds, structured and unstructured, how do you sort out what's relevant and how do you monitor, how do you tap, how do you do real-time captures at 10 gigabits and terabits when the data is moving so fast? We're not just building enterprise features. Cisco's done that really well for the last two decades, that's their market. But yet if you look at the way servers are sold today, only half of them are going into an enterprise application. The other half, which are high-performance computing and Web, are going into the cloud applications. They don't require traditional enterprise features. Just like mainframes moved to client server, enterprises are moving to more HPC and Web, and those features are much more about reducing OPEX and improving the orchestration and traffic visibility and data analysis.

The fifth and final differentiator is network visualization. What VMware did to servers with server virtualization, we believe jointly working with VMware we can do with network virtualization. VM sprawl has created network sprawl. Arista and VMware, together with a number of other vendors, Broadcom, Cisco, etc., defined to me what is one of the most breakthrough specifications in our industry — VXLAN, virtual extended LAN. The VLAN, as a unit, is something we all grew up with and invented back in the '90s. It's been with us 25 years, way too long. VLAN boundaries have plagued the deployment of virtualization because you're limited to 6,000 VLANs or 16,000 VLANs, and you've got many more virtual machines. So therefore, you've had a vi-admin manage one, the virtual network, and the command line interface or Cisco admin manage the physical network. These two worlds need to come together. Arista, working particularly closely with VMware, has been able to bridge that gap between network physical and network virtual, using VXLAN. VXLAN all of a sudden opens up the boundary from 16,000 to 16 million possible entries. So we're very excited with the technology we demonstrated at [the VMworld conference].

Is it deployed now in the market?

Very early. We are one of the first to come out with it. We showed it August 2012, and we showed interoperability with VMware, EMC and F5. We shipped a product based on it, the Arista 7150, in November.

Say I'm a big Cisco installation today. When would I talk to Arista? What's the need that opens the door?

It could be project-based or it could be a strategy. When it's project-based, it's usually that you're deploying high-frequency trading or you need a high-performance compute solution, usually InfiniBand and Ethernet get reviewed. Sometimes InfiniBand gets chosen because the supercomputer guys really like it and other times it's high-density 10GB. Another application is big data. Storage is no longer just a fibre-channel SAN — you will start needing 10GB storage for iSCSI or more and more Hadoop clusters with direct-attached storage. That becomes another very interesting Arista project. Virtualization, the VM sprawl. Another one we're starting to see more of is huge media rendering, and video applications that are pushing the envelope of bandwidth. Where the application intersects the network is the common theme through all the projects.

On the other hand, Arista has to walk before it runs. We've been growing at the rate of one new customer a day since we started shipping. We now have 1,700 customers. Deployments usually start small, then they get really fascinated and intrigued and appreciative of EOS, and all of its operational advantages, how open it is, how easy it is to use. The training is very easy and a Cisco CCIE expert would be able to use Arista right away, because we have similar command-line interfaces and operational look and feel. Where we don't have to invent, we don't. Where we had to invent for these specific use cases we do, so most often it's a use case or a project. Sometimes it's a data center build-up. After they use us in one project, they'll say they want to consolidate data centers. I would say 10% to 20% of them are now standardizing on Arista as their data center strategy.

You mentioned about 1,700 customers. Give me a sense of your business progress to date.

We're not supposed to [talk revenue] but the company is very young, it's only 5 years old. We've gone from 30 employees when we started to more than 500. I guess the biggest thing I'd leave you with is that in the beginning we were a market leader for financials and high-frequency trading which, as you know, is a tough customer. We've always had to go into mission-critical [environments] and we didn't have it easy ever. It wasn't like we were in a little lab somewhere. We believe we are today 70% to 80% market leaders in high-frequency trading. In 2008, 2009 and even part of 2010, that was 70% of our business. Today it's diversified nicely into three areas. The first is financials. The second is what I call Web 2.0, and the massive scale of their deployments, the cloud scale, really. The third is cloud and service providers. Every service provider is looking to be a cloud vendor. In all of these three cases we are being looked at as the innovative alternative to traditional legacy players.

You were at Cisco for a long time.

Yeah, 15 years. I intended to be there two years. But I was there 15 years, two years at a time.

So how did your experience at Cisco shape this?

I had a big hand in shaping Cisco's enterprise switching strategy, and it helped me

appreciate what to do and what not to do. At some level I don't feel we compete with Cisco because we're not taking on the traditional enterprise market. But at other levels I feel like I learned a lot about what not to do and how to do [things] better, by being more application-focused and really taking advantage of the market disruption from enterprise to cloud, and then to big data and network virtualization. Cisco, in my view, will always be the enterprise market leader. Arista is inspired and aspires to be the cloud networking leader and really be a complement to Cisco.

Other networking companies have tried to address the needs you have described. Let's take a case in point: Juniper seemed to be targeting the same kinds of problems, so why did the company struggle with its QFabric?

Without making it specific to one vendor, I would say three or four years ago, you rightly pointed out that the market was very crowded. There was Juniper, HP looked like they were coming on strong, there was Force10 that then got acquired by Dell, and then there was Brocade that had acquired Foundry. They have taught me that focus is important. We stayed relentlessly focused on building a standards based open architecture for data centers. I think many of these vendors, they get distracted by growth. It's a difficult call, in the public market especially. It's easy to do when you're private and you don't have to explain things to people. But do you go broad and wide or do you go a mile deep? My belief is I am participating in one of the largest total available markets in the history of networking. The 10G market is going to go from a couple of billion to $15 billion in 2016. I should not be distracting myself with other markets. I should relentlessly focus on doing my one market very well. I would say that is the failing of many competitors who don't have that kind of focus.

How has the strategy changed since launch? What have you learned in that time period?

We built a point product then and our strategy has changed to a portfolio. We have gone from a top-of-rack (48 ports) to 384 ports in a chassis. Secondly, our software has evolved, not just in millions of lines of code, but in terms of the agility and innovative features. We've been putting out releases practically every quarter since then, to the point that some of our customers say: "Hey, slow down a little! We're unable to absorb it as quickly as you put it out." One customer said to us: "We have all these data centers and we're racking up our servers, we're connecting it to a VLAN and we're enabling DHCP, this whole process is taking us two hours." With our zero-touch provisioning we were able to cut that down to 20 minutes. You think of this in one data center and how you replicate it, it's a huge multiplier. The third area I'd say we have really evolved is partnerships. We've gotten closer to the big data companies like Cloudera and the virtualization companies like VMware. Because we are best-of-breed, we are in some ways less of a threat and more of a partner to many. The security companies, like Palo Alto Networks, the application delivery companies like F5, view us as a friendly face.

What do you do with Cloudera?

We have actually installed joint networks for big data together. The biggest issue with using these kinds of direct-attached Hadoop systems is that you have to have a network with fast failover characteristics, the right buffering characteristics, and you actually almost have to have a Hadoop tracer-like function between the storage and the network. Because, remember, all of a sudden you wiped out the concept of a storage-area network, but you still need to have the resilience of a storage-area network. We're in several joint customers together, particularly in mission-critical financials.

I want to go back to EOS for a bit. There is sort of this myth of the unified operating system in networking, but competitors and customers are all running multiple versions and flavors of these OSes. What makes this software different? Why would somebody believe that you have a single unified network operating system where people have struggled with that?

We've proven it. Even though we've been here five years and we've done all the software releases, we still have one single binary image. Nobody has to get a Ph.D. on our software releases because we've kept one single unified code base. Secondly, when people play with the software, they realize that: "Oh, this can do Python scripting, I can write agents to it." So the power that we've given them to enable things that even we don't enable is like no other. Now, I could tell you some people love it. The engineering community loves it. The CIO community is afraid of it. So we also have a lock-down mode where we can have all the security and people can't go in and simply start writing.

At the same time, I would say we are a little bit of a Sybil with our EOS. One side of us looks just like a Red Hat or Linux, and the server guys have fun with it. They can do TCP and dump and bash. It's a Linux kernel, right? Then the other side, for a Cisco administrator, looks just like a Cisco network. When we work with VMware, we talk straight into vCenter and vSphere. So I think the flexibility that we have offered in being open, at the same time not destroying the paradigm between the virtual admin and the sys admin for the server, and the network admin has been unique.

Let's go back to SDN. What's real and what's false about SDN?

If you ask 10 people what SDN means they'll give you 10 different answers. But if I had to describe it in one or two words, I would say: open and programmable. There's been so much vendor lock-up in networking, with the huge operational cost of being locked in with one vendor. That mainframe model in networking is what SDN is challenging. Why is SDN fever and hype so high? People are sick and tired of the vendor lock-in and proprietariness and they are looking for a movement. Now, how and when will that movement happen? Like anything, you have to be pragmatic about that. When the hype is so high the market isn't that big, right? But in my view, SDN has a tremendous opportunity to succeed if we're pragmatic about the use cases. Is SDN OpenFlow? No, it's not just OpenFlow. Is it OpenStack? No, it's not just OpenStack. Is it VXLAN or network virtualization? Understanding what you can actually do with SDN is the key here.

Let's talk about that programmability aspect. When I talk to people in the market, there are some who are really excited about that piece, but others who think there are only a limited number of things you would ever want to program the network to do. What do you envision people programming the network to do?

I think they're both right for different reasons. In a traditional network, no one is looking to toss their IP out any time soon, so whatever you do you've got to make sure your IP network is up and running. But say you're going to do a green field [installation]. This is how the OpenFlow SDN movement got started at Stanford. [Professor] Nick McKeown was doing this project called Clean Slate, where he was telling his students: "Imagine a world with no IP. How would we define it?" That's all great for vision and strategy, but we've got hundred of thousands of customers operating networks, so you have to understand that no matter how inflexible and how much of a headache your current architecture may be, TCP/IP does work. Then you look at the model that SDN is coming up with, which I call the controller, overlay controller model. That's a controller for OpenStack, OpenFlow, network virtualization, each of them is a use case — it's a specific case where you need programmability. I agree that you shouldn't go and mess with the big IP network. If it's not broken, don't fix it.

Understand what are the use cases you're trying to augment with programmability. I can think of three or four use cases. One of the ones that we found, especially with OpenFlow, but also in IP networking, is data tap aggregation. When you're running at the 10G speeds we are, everybody is looking for traffic visibility and understanding what's going on in the network. You can build an out-of-band

controller with OpenFlow, whether it's Big Switch Networks or open source controllers from Floodlight or NEC, and have an OpenFlow agent on our switches, and have a very simple SDN network that's highly programmable, and still works in hybrid mode with your IP network. That could be one case. There's the Nicera case, which is also, in my view, a programmable use case, but it's for strictly network virtualization. You keep the IP running, but you need a network virtualization platform that can program your virtual switches, whether they're VMware switches or open virtual switches from an OpenStack environment. Today, this is literally like two islands; there's the physical switch and the virtual switch. With Arista working closely with VMware and Nicera, we can transcend the virtual-to-physical islands, where every VXLAN vSwitch port automatically maps to a hardware port. Now you've got network virtualization not as two separate failure domains, but transcending virtual-to-physical, potentially even to a cloud, architecture down the road. This is in a VMware environment, but there's no reason you couldn't do it in an OpenStack environment with quantum plug-ins as well. So that's another use case.

Do you believe SDN fundamentally changes the competitive landscape?

Yes, but I believe the controller vendors in isolation won't succeed. The networking vendors, if they get defensive with just IP won't succeed. You have to have the Arista view, which is have two personalities. Work in a controller mode, but work also with your IP network. That's the mistake I think SDN is making, in that they're thinking of it as only green field. In reality there's a whole world of IP there that you need to work with while you're trying to develop the use cases.

Server virtualization was essentially owned by VMware and the software vendors, not the server vendors. Who ends up owning SDN?

[The server vendors] got defensive. If the networking vendors do not embrace it because it requires a new software paradigm that they haven't built, then they stand to lose, because over time there will be more and more use cases that disrupt them. Customers like that. I was talking to a customer today who said: "The most liberating feeling for me now is I can be multi-vendor, and it hasn't cost me that much money. I don't know if there are that many SDN use cases, but I love it." Arista feels very fortunate that we got an eight-year head start. We spent four years building the software, four years commercializing it, and now we're sitting in the middle of an SDN momentum and a switch momentum that puts us on the natural cusp, if you will, where we can be working with the old and still developing the new.

Does Arista have its own controller?

No.

Is that something you're going to have?

Our control plane and data plane will be open, and we will work with all the controller vendors that you deploy. HP Opsware, vSphere VMware, Nicera, Big Switch, Floodlight, NEC, IBM Tivoli, EMC Smarts. These are all to us controllers. We don't view ourselves as the management expert. Now, if you want to go develop specific use cases for a controller on our switch, we can do that too. And people do that. Like for example, we worked with Splunk very closely to develop a configuration management tool with them.

If you're a CIO or a senior IT executive, and you are on the sidelines looking at SDN and wondering what it's all about, what's the 30-second answer on why they should care about it and start thinking about it now?

Because it unshackles their traditional networking decisions from their application and helps them develop new use cases that they couldn't do before, or only had to do with traditional vendors. The key for them is to understand what problem they are trying to solve. Solve that out-of-band and work with the existing [network].

Using merchant silicon versus custom ASICs, is there a limit to where that can take you?

I think custom ASICs have fallen behind by several years, and unless a vendor can build and compete against merchant silicon, there's no point in doing custom ASICs. It's something that the established vendors have to come to terms with, just like the server community did. There was a time when SPARC was sparkling for Sun, and then everybody had to embrace the x86 Intel world. A similar phenomenon and revolution is happening in networking.

But does it limit the speed at which you can develop your product?

No, actually, it's better. We were most scared when we were only beholden to one vendor. The way our software architecture works, 90% of our engineering is all software. Then there's a driver layer. The driver layer is where we customize to the silicon. Today we operate with Intel drivers, with Falcon drivers, with Broadcom drivers, we used to have a company called Dune that got acquired by Broadcom, you know, Marvel. The more drivers, the more we have the roadmap and the R&D of all the silicon vendors, because remember there are always risks. The biggest risk with the silicon vendors is if they miss a cycle. They don't miss it by one or two weeks. They often miss by one or two years, whether they work for you inside the company or outside. We like the fact that we have drivers and have developed drivers over time for all these chip vendors.

What's ahead for Arista in 2013?

Expect to see more capacity, more software, more of everything, and the replacement of our older products. Second, expect us to continue to be application focused, because that's where we think we get appreciated. If it's a straight, traditional network, where nobody gets fired for buying IBM or Cisco, that's not where Arista shines. Arista will continue to provide thought leadership, like we did with high-frequency trading, and like we do now with big data and network virtualization. We're very excited when we think of the number of things we have to do in the software and application world, and prioritizing them, there's so much ahead of us.

Last question: the classic elevator situation. You've got 15 floors with a CIO. You tell them what about Arista?

We're the best-of-breed data center and cloud networking alternative in the market. We're not a cost center, we are an enabler of applications. There are people in high-frequency trading who have told us: "We make $2 million a day on your boxes." In a nutshell, that's what I would say. We are the thought leader in cloud networking, we enable the applications and we save you CAPEX and OPEX.

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EXHIBIT A9

BIG DATA

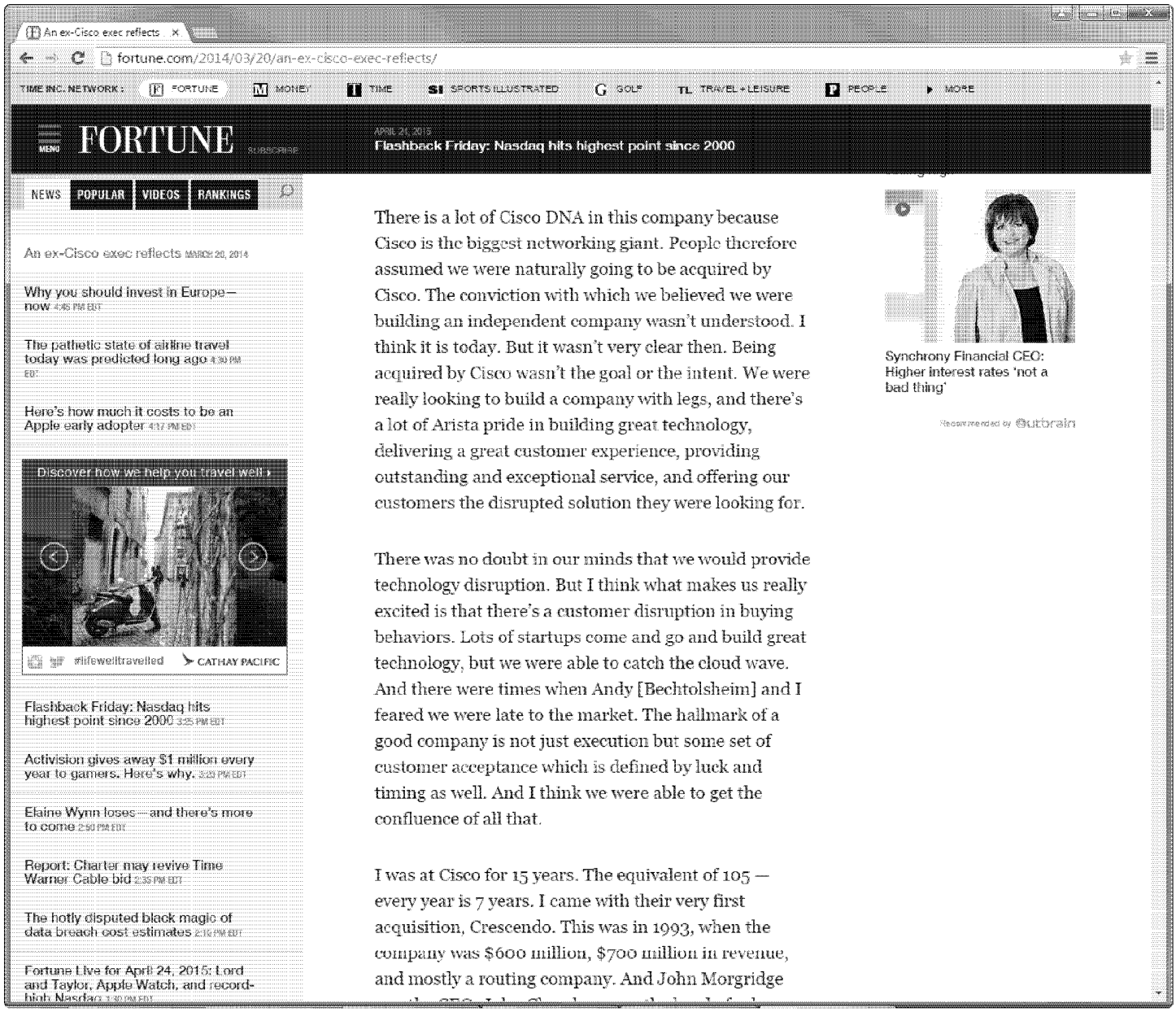
An ex-Cisco exec reflects

by Adam Lashinsky @adamlashinsky MARCH 20, 2014, 2:55 PM EDT

In conversation with Jayshree Ullal, CEO of Arista Networks.

FORTUNE — *Jayshree Ullal made her career at networking leader Cisco Systems, before leaving in 2008 and shortly after that joining a new company started by Andy Bechtolsheim, a founder of Sun, and several others. In a recent interview, she discussed what she learned at Cisco—and how her new company, Arista Networks, competes against it. Below, her words as told to* Fortune*'s Adam Lashinsky.*

In 2008 Arista was 30 engineers and getting ready to launch product. I left Cisco in May of 2008, and I took the summer off to evaluate clean tech and social networking, and finally came back to my roots.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There is a lot of Cisco DNA in this company because Cisco is the biggest networking giant. People therefore assumed we were naturally going to be acquired by Cisco. The conviction with which we believed we were building an independent company wasn't understood. I think it is today. But it wasn't very clear then. Being acquired by Cisco wasn't the goal or the intent. We were really looking to build a company with legs, and there's a lot of Arista pride in building great technology, delivering a great customer experience, providing outstanding and exceptional service, and offering our customers the disrupted solution they were looking for.
There was no doubt in our minds that we would provide technology disruption. But I think what makes us really excited is that there's a customer disruption in buying behaviors. Lots of startups come and go and build great technology, but we were able to catch the cloud wave. And there were times when Andy [Bechtolsheim] and I feared we were late to the market. The hallmark of a good company is not just execution but some set of customer acceptance which is defined by luck and timing as well. And I think we were able to get the confluence of all that.
I was at Cisco for 15 years. The equivalent of 105 — every year is 7 years. I came with their very first acquisition, Crescendo. This was in 1993, when the company was $600 million, $700 million in revenue, and mostly a routing company. And John Morgridge
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was the CEO. John Chambers was the head of sales. And this acquisition really put John [Chambers] on the map. Crescendo, because they acquired the company for $93 million, and we went on to do anywhere from, I don't know, put the numbers at $10 billion to $15 billion in switching revenue over that period of time. All of which is not just credit to us. There was a significant investment.

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A side story there you'd be interested in. First of all, when they buy a company they ask all the key chief executives to sign up for two years. I agonized over two years. I said, "How can I ever stay in a big company for two years?" Two years felt like an eternity. I wept about that process. So I lived in Cisco two years at a time for 15 years. But I think part of why Cisco became an addiction for me was they really cultivated a startup and an entrepreneurial environment through that Crescendo acquisition as part of a larger company.

The company had T-shirts at that time with an arrow that said, "path to a billion." They were 600-something million, and their goal was to hit a billion [dollars in revenue; Cisco's fiscal-year 2013 revenues were $48.6 billion]. And John Chambers came to me and said, "I want you to do switching, and that must be another billion."

So I rolled my eyes like teenagers do and said, "What are these guys talking about? They haven't hit a billion in their mainstream market." Crescendo was all of 10 million in revenue when they bought us, and it seemed absurd to me that they would ask me to do a billion.

And I think I even made some flip comment to him like, "Just because you did it in routers doesn't give you a right to do this in switches." So that was John Chambers — very aspirational and very optimistic and "Yes we can do it." It wasn't Crescendo that made Cisco, it was the commitment, the vision, and the inspiration of investing in that acquisition.

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I think they're a very tough competitor, and I think they're doing a fine job of holding their own. Cisco still has very large market share. I would argue almost unnaturally high market share. It's somewhere between 50% and 70% of the switching and datacenter market. We don't participate in the entire switching market that Cisco has. Arista is only focused on the data center and the cloud piece of it. But I guess I would come back to you and say that no market is forever. All markets mature and what's exciting for Cisco is to have some tough competitors that keep them nimble, and certainly, Arista's an example of that.

But what's most exciting for Arista is we don't have to

succeed because Cisco fails or vice versa. The market, the total available market, is so large that we both can succeed without Peter robbing Paul, or whatever. So in my view customers are looking for an alternative. The more conservative customers who have grown up with Cisco in their traditional enterprises certainly will stay with Cisco. Just like you don't get fired for buying IBM, you won't get fired for buying Cisco, and those are not the traditional technical customer community that comes to Arista first. They might come later.

We're very much in the early adopter phase where the ones who come to us are the ones who are really looking to build this open modern network and know they need a multi-vendor solution to that.

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It's really a tipping point moment because remember, the data center market right now is anticipated to be around $3 billion or $4 billion. And in the next three years, it's supposed to get to $10 billion. Some even say $16 billion. But let's take the low-end of this. So, the way we look at it is even if you say half or 70% of Cisco, because that's the way life goes, even with the best technology people will go with old habits. We think that there is enough market, enough opportunity and enough customers who want a second vendor. And because we don't have the legacy of having built an enterprise, we could start with a clean sheet of paper and only offer that. Cisco will come from their strength of legacy and Arista will come from its strength of

that. Cisco will come from their strength of legacy and Arista will come from its strength of novelty.

We have a great deal of respect for the company and in fact I think our approaches are entirely different. Since I helped build the enterprise, I would never compete with Cisco directly in the enterprise in a conventional way. It makes no sense. It would take me 15 years and 15,000 engineers, and that's not a recipe for success.

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